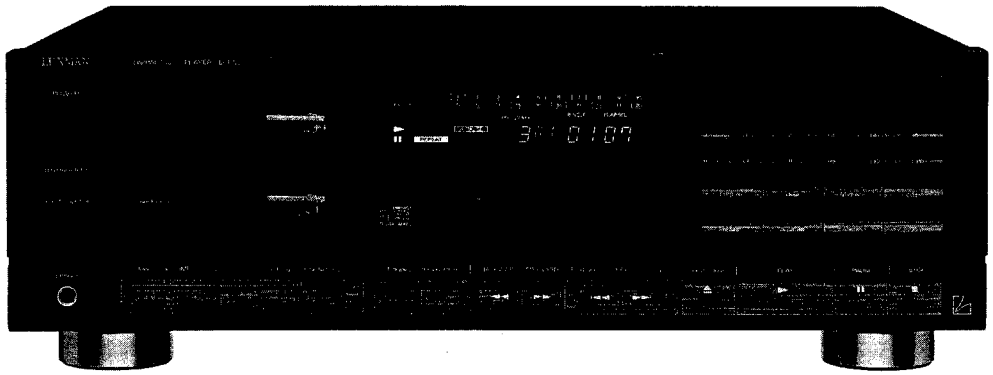
SERVICE MANUAL

Compact Disc Player

D-107u

- Regarding the disassembly for the cabinet section and CD mechanical section, please refer to the D-105u Service Manual (Part No.68P20520W02).
- Disassemblyの〈Cabinet Section〉と〈CD Mechanism Section〉の項目については、D-105u (68P20520W02) のサービスマニュアルを参照願います。



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Additional Schematic Diagram Inserted

Specifications

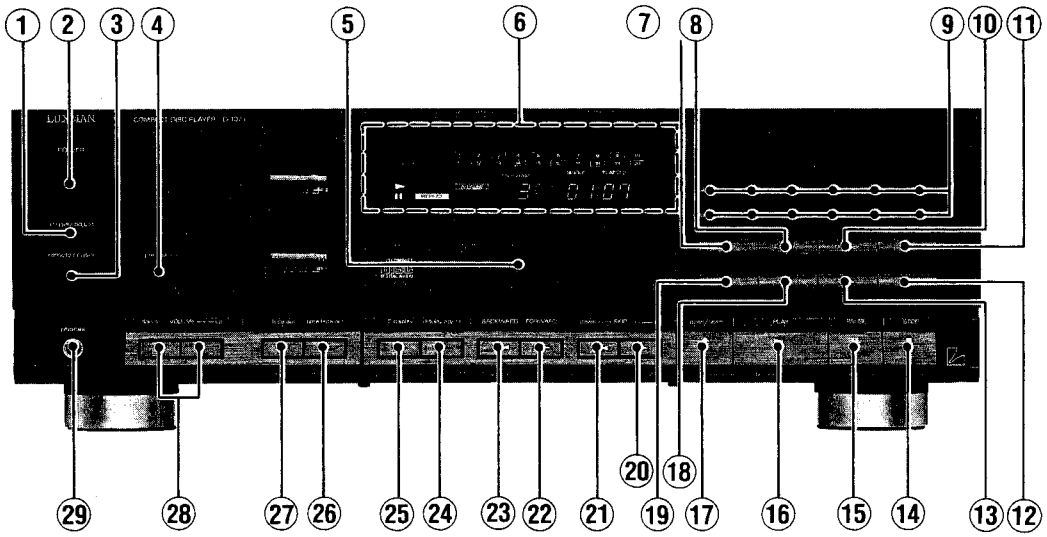
< CD SECTION >

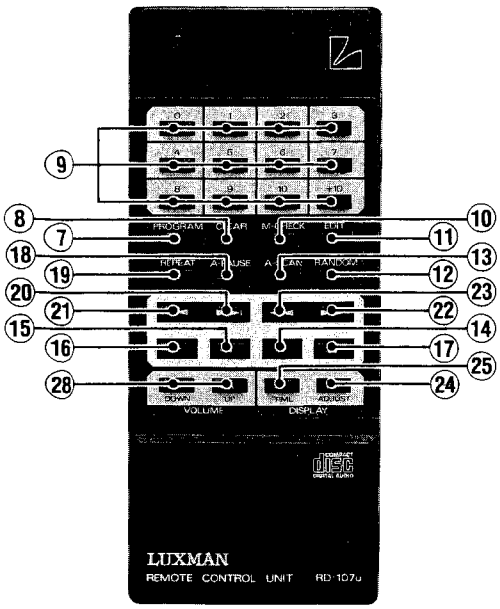
System ..... Optical (Compact Disc System)
Quantizing Bit Number ..... 16 Bit Linear System
Channels ..... 2 Channels, Stereo
Pick-up ..... Semiconductor Laser Pick-up
Output Voltage ..... 2.1 V ±1 dB
Frequency Response ..... 20 Hz~20 kHz ±2.5 dB
T.H.D. (1 kHz) 0.12%
S/N Ratio ..... 95 dB
Dynamic Range ..... 85 dB
Separation (1 kHz) ..... 83 dB
Head-phone Output Voltage (1 kHz, 0 dB/8 ohm) ..... 260 mV±1 dB
Power Supply ..... AC100 V, 50/60 Hz (JA Model Only)
AC120/220/240 V, 50 Hz (AD Model Only)
Power Consumption ..... 28 W
Semiconductors ..... 20 IC's, 25 Transistors, 44 Diodes, 2 Zener Diodes,
2 Vacuum Tubes (JA Model Only)
20 IC's, 25 Transistors, 48 Diodes, 2 Zener Diodes,
2 Vacuum Tubes (AD Model Only)
Dimension (W×H×D) ..... 469×147×342 mm (JA Model Only)
438×147×342 mm (AD Model Only)
Weight ..... 12.7 kg (JA Model Only)
11.7 kg (AD Model Only)

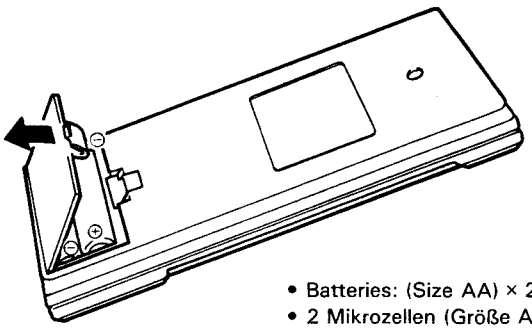
< COMPACT DISC >

Track Pitch ..... 1.6 µm
Modulation Frequency ..... 44.1 MHz
Transfer Rate ..... 4.3218 MBit/sec.
Dimension ..... 80 or 120×1.2 mm

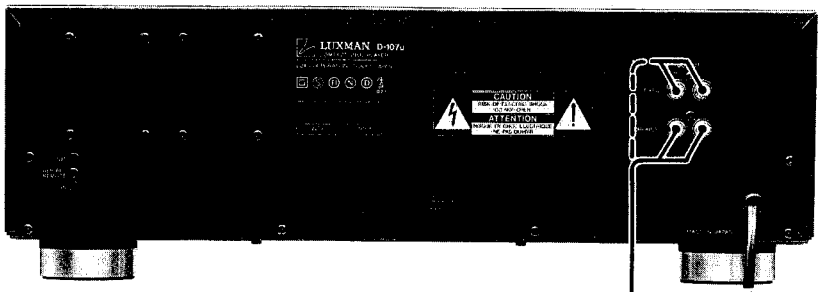
Reference Illustrations



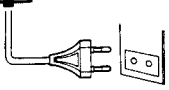




- Batteries: (Size AA) × 2
- 2 Mikrozellen (Größe AA)
- 2 piles (Dimension AA)
- 2 pilas (tamaño AA)

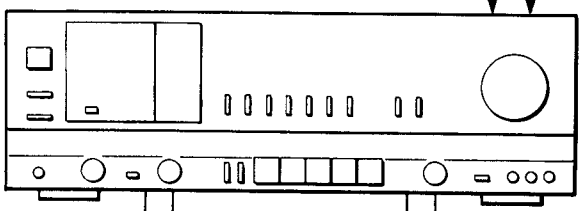


- to CD input jacks
- an die CD-Eingänge
- aux prises d'entrée CD
- a las tomas de entrada para CD

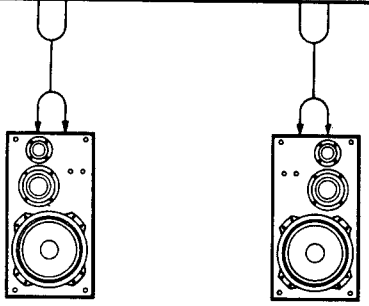


- AC Line
- Netz
- Cordon secteur
- Alimentación de red de CA

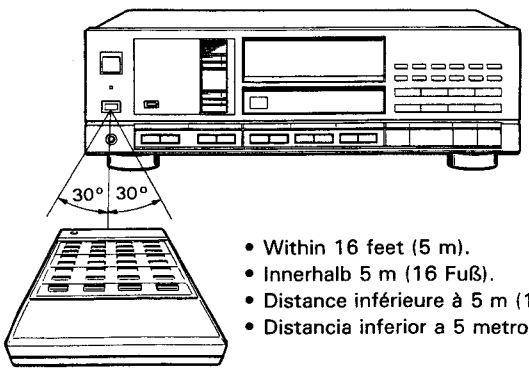
- Amplifier
- Verstärker
- Amplificateur
- Amplificador



- Japanese Model
- Japanisch-Modell
- Modèle japonais
- Modelo japonés

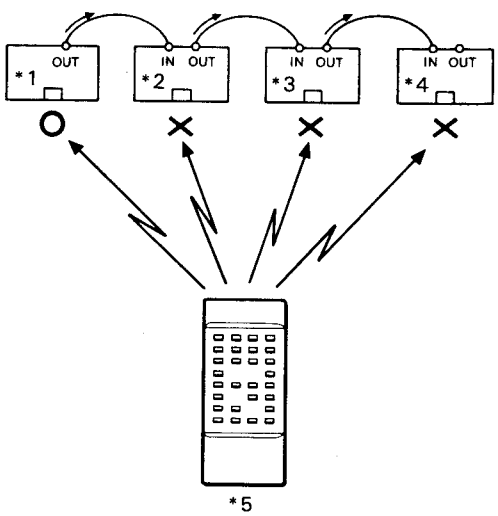


- Speaker System
- Lautsprecher
- Haut-parleurs
- Sistema de altavoces



- Within 16 feet (5 m).
- Innerhalb 5 m (16 Fuß).
- Distance inférieure à 5 m (16 pieds).
- Distancia inferior a 5 metros (16 pies).

Signals/Signale/Signaux/Señales



Controls, Switches, Jacks & Terminals

FRONT PANEL

1. "display adjust" indicator

This indicator lights up when the brightness of the display is set with the "display adjust" button.

2. POWER button

Use this button to turn the power on or off.
The sound is output from the OUTPUT jacks when the vacuum tube becomes warm by turning the power on.

3. "remote sensor"

Receives the signal from the RD-107u remote control unit.

4. "pre-heating" button

Use this button to preheat the vacuum tube heater.
When this button is depressed, the vacuum tube is pre-heated even if the power is turned off. Therefore, the sound is output from the OUTPUT jacks only 10 seconds after the power has been turned on.

5. Disc tray

Insert a compact disc on the disc tray. The disc tray can be opened or closed by pressing the "open/close" button. Align the compact disc with the groove.

NOTE: To use 8 cm (3 inch) single CD's, place them on the inner circular grooved area marked "8 cm disc" on the tray.

6. Display

This display indicates the preset operation mode, elapsed or remaining time, and on or off condition of the supplied functions.

7. "program" button

Use this button to set the unit to the program mode.
During the program mode, "PROGRAM" is indicated on the display and the tracks selected with the number buttons are programmed.

8. "clear" button

Use this button to cancel the programmed tracks.

NOTE: This button works only in the stop mode.

9. Number buttons (0 to 10 and +10)

Use this button to perform programming of tracks, direct access, time setting for edit or time-fade-out.

10. "M-check" (memory check) button

Use this button to check the tracks or the order of the program.
This button works only in the stop mode. Also, this button is used to call up the track to be cleared.

11. "edit" button

Use this button to automatically edit the tracks on the condition that the tape length is sufficient.
Press this button, and the EDIT indicator blinks.
While it is blinking, set the length of one side of the tape with the number buttons. The tracks which can be played within the tape length of both sides are automatically edited.

12. "random" button

Use this button to play the tracks selected at random.
During the random play, the RANDOM indicator is turned on.

13. "A-scan" (auto scan) button

Use this button to play the first 10 seconds of the track one after another. The A-SCAN indicator is turned on during automatic scanning.

14. STOP button (■)

Use this button to stop playing. Pressing this button during play cancels the program and edit modes.

15. PAUSE button (II)

Use this button to stop playing momentarily. The II indicator is tuned on during pause mode.

16. PLAY button (►)

Use this button to start playing. The ► indicator is turned on during play mode.

17. "open/close" button (≙)

Use this button to open or close the disc tray. When the tray is closed with a inseted disc, the DISC IN indicator is turned on. When the disc tray is opened, the all preset functions except the display adjust function are released.

18. "A-pause" (auto pause) button

Use this button to stop playing momentarily at the end of each track. The A-PAUSE indicator is turned on when this function is activated.

19. "repeat" button

Use this button to repeat play, program play, random play, edit play or auto scan. The REPEAT indicator is turned on during repeat mode.

20. SKIP UP button (▶▶I)

Use this button to skip tracks in forward direction.

21. SKIP DOWN button (I◀◀)

Use this button to skip tracks in backward direction.

22. FORWARD button (▶▶)

Use this button for fast-forwarding. The tracks are fast-forwarded while this button is pressed.

23. BACKWARD button (◀◀)

Use this button for fast-backwarding. The tracks are fast-backwarded while this butoon is pressed.

24.DISPLAY ADJUST button

Use this button for adjust the display brightness.
Four steps of brightness and turning-off are selectable.
During adjusting, the "display adjust" indicator blinks.

25. "T-display" button

Each push of this button selects one of 4 disc timing displays as follows:

SINGLE ELAPSED:	To indicate the elapsed play time of a track
TOTAL ELAPSED:	To indicate the elapsed play time of the whole disc
SINGLE REMAIN:	To indicate the remaining play time of a track
TOTAL REMAIN:	To indicate the remaining play time of the whole disc

26. TIME FADE-OUT button

Use this button to fade-out the volume from the VARIABLE OUTPUT or "phones" jacks at the time preset with the number buttons. When the fade-out operation is completed, the unit is set to pause mode and the volume automatically increases to the original level.

27. FADE-OUT button

Use this button to fade-out the volume from the VARIABLE OUTPUT jacks. When the fade-out operation is compleated, the unit is set to pause mode and the volume automatically increases to the original level.

28. VOLUME "up/down" buttons (△ ▽)

Use these buttons to adjust the volume output from the VARIABLE OUTPUT or "phones" jacks. During volume adjustment, the output level (–00 dB to –70 dB, --- dB) is indicated on the display. Normally set it to –00 dB and adjust it if necessary.

29. "phones" jack

For connecting the stereo phone plug of head-phones. The volume can be controlled with the VOLUME buttons. Also fade-out and time fade-out can be activated.

REAR PANEL

30. SERIAL REMOTE IN/OUT jacks

Connect this jack with the optional remote control unit to perform system remote control.

NOTE: Turn the power off before connecting these jacks.

31.VARIABLE OUTPUT R/L jacks

For connection to the CD inputs of any amplifier.
The output level from these jacks can be controlled with the VOLUME button. Also, face-out and time fade-out can be activated.

32. FIXED OUTPUT R/L jacks

For connection to the CD inputs of any amplifier.
The output level is 2 volts fixed, referenced to 0 dB recording level.

33. Power cord

Insert the AC plug of the D-107u into any wall outlet.

Connection Guidelines

BEFORE MAKING CONNECTIONS

It is always wise to ensure that all AC power cords of the various components that you are interconnecting are unplugged from the wall outlets during the hook-up process. This will prevent any inadvertent damage to your speakers or amplifier from incorrect control settings or connections.

CONNECTION OF THE OUTPUT JACKS

■ Connect either VARIABLE or FIXED OUTPUT jacks to the CD input jacks of the amplifier with the supplied phono plug cord.

NOTE: To adjust the output level or activate fade-out or time fade-out, connect the VARIABLE jacks.

In addition, audio jacks on Luxman equipment, including the D-107u, have red centers for right channel and white for left channel.
When making connections, follow the connection diagram (See page 5.), referring also to the descriptions for items 30 through 33 on page 7.

CONNECTION OF THE SERIAL REMOTE IN/OUT JACKS

• "Daisy Chain" Serial Connections (See page 5).
O: Remote Operation Possible
X: Remote Operation Not possible
*1: Remote Controller (F-105, U-100, etc.)
*2: D-107u
*3: Tape Deck (Future Product)
*4: Tuner
*5: RF-105, etc.
Components *2,3 and 4 can be connected in any order.

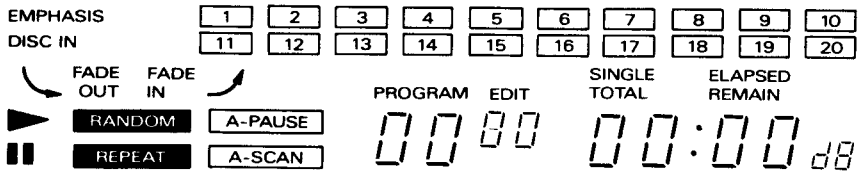
NOTE: Turn the power off before connecting these jacks.

CONNECTION OF THE AC POWER CORD

Insert the AC plug of the D-107u into any wall outlet.

CAUTION: NO RELATION TO THE POWER BUTTON. AN APPARATUS FALLS INTO CURRENT-CARRYING CONDITION, AS SOON AS THE AC POWER CORD IS CONNECTED.

Operation Guidelines



INITIAL SET-UP

■ Turn the power on.
- Play is delayed until the vacuum tube becomes warm (approximately 30 seconds when the preheating is off, or approximately 10 seconds when it is on).

■ Press the "open/close" button and set a compact disc on the disc tray, label side up.

NOTE: To use 8 cm (3 inch) single CD's, plade them on the inner circular grooved area marked "8 cm disc" on the tray.

■ Press the "open/close" button to close the disc tray.
- If one of the ▶, ❚❚, number or "A-scan" buttons is pressed when the disc tray is open, the disc tray is closed without pressing the "open/close"button and the unit performs the operation of the button pressed.

■ When the compact disc is inserted, the DISC IN, track number and total play time of the disc are indicated on the display.
- Set the volume control of the amplifier to minimum and adjust it after play has started.

PLAY

■ After the compact disc is loaded, press the PLAY button.
■ The ▶ indicator is turned on and play starts from the first track.
■ Play stops with completion of the last track, when no REPEAT indicator is turned on.

PAUSE

■ Press the PAUSE button.
■ The ❚❚ indicator is turned on and play pauses when the PAUSE button is pressed.
■ To resume play, press the PAUSE or PLAY button. The pause mode is cancelled and play is resumed from the previous position.

STOP

■ Press the STOP button.

NOTE: Pressing of the STOP button during stop mode cancels the program or edit mode.

TO SKIP FORWARD OR BACKWARD

■ To skip forward:
Each pressing of the SKIP UP button skips tracks in forward direction one by one. Keep the button pressed to skip all tracks after the one indicated on the display.
Keep the FORWARD button pressed for fastforwarding.

■ To skip backward:
Pressing of the SKIP DOWN button during play repeats the current track from the beginning.
Each pressing of this button between tracks skips tracks in backward direction one by one. Keep the button pressed to skip all tracks before the one indicated on the display.
Keep the BACKWARD button pressed for fastbackwarding.

DIRECT ACCESS

Play can be started from the selected track with the number buttons.

■ Select the desired track number with the number buttons during stop or play mode.
- If the track is selected during pause mode, the unit is set to pause mode at the begining of the selected track.
- The direct access can not be activated in program, random play, edit and time fade-out modes.

■ The selected track is called up and played.

[To select a track]
For track number 1 to 10, press the number buttons of the track number. For track number 11 or higher, first press +10 for the 10 unit and 0 to 10 for units from 1 to 10.

- If one of the ▶, II, ⏮ or ⏭ buttons is pressed after selecting the 10 unit with the +10 button, the operation button fuctions in the same way as when the 0 button is pressed.
- Only track numbers existing on the compact disc can be selected.

NOTE: Direct access will be cancelled if a number button other than "+10", the Play button, or the Pause button is not pressed within 4 seconds after pressing "+10".
The "+10" button will not operate with discs containing 10 or fewer tracks.

Example: To directly access the 17th track
- Press +10 and 7 in this order.

Example: To directly access the 20th track
- Press +10 and 10, or +10 twice and 0 in this order.

RANDOM PLAY

If desired, activating this function will allow the computer in the unit to select tracks, in a completely random manner, for playback. While the selection is random, it does not repeat any given track, rather, it plays each randomly selected track once, shutting off automatically after all tracks are played. If the REPEAT function is also selected, then the unit will continuously replay all tracks but in a completely different order each time.

■ Press the RANDOM button. The RANDOM indicator is turned on.

NOTE: When the PROGRAM or EDIT indicator is lit or blinking, the program or edit mode is released by pressing the RANDOM button.

■ Press the PLAY button
- Press the RANDOM button during play, and random play is started.

NOTE: During the random play mode, undesired tracks that you do not want included in the random selection, can be individually deleted. Simply press the number button of the track(s) you wish to delete. The deleted track number(s) will disappear from the upper part of the display.

■ The unit stops with completion of the last track, when REPEAT indicator is not turned on.

AUTO SCAN

The first 10 seconds of each track on the compact disc can be played in numerical order.

■ Press the "A-scan" button. The A-SCAN indicator is turned on and auto scanning is started.
- To cancel auto scan mode, press one of the ◀◀, ▶▶, ⏮, ⏭, II, ■ or number buttons, or the "A-scan" button again.

■ The unit stops with completion of the last track, when no REPEAT indicator is turned on.
- Auto scan can be activated with random or program play.

AUTO PAUSE

The unit can be automatically set to enter the pause mode at the end of any currently playing track.

■ Press the "A-pause" button. The A-PAUSE indicator is turned on.
- While the A-PAUSE indicator is turned on, pressing one of the ⏮, ⏭ or number buttons sets the unit to pause mode at the beginning of the track.

■ To cancel auto puase mode, press the "A-pause" button. The A-PAUSE indicator is turned off.

PROGRAM PLAY

Only desired tracks can be selected and played.

■ Press the "program" button in stop mode. The PROGRAM indicator is turned on. Select the desired tracks with the number buttons in order to program.

NOTE: When the RANDOM or EDIT indicator is lit or blinking, pressing the "program" button cancels the random or edit mode.

■ A total of 32 tracks can be programmed. If you try to program more tracks, the FULL indicator is turned on for about 4 seconds and no more programs are accepted.
■ When the ▶ indicator is blinking, press the PLAY button and program play is started.
■ The unit stops with completion of the last track, when no REPEAT indicator is turned on.

NOTE: If the Repeat button has been pressed, REPEAT indicator will be displayed and the frames around the track numbers will reapear when the sequence repeats. Only those tracks programmed will be repeated.

TO CHECK THE PROGRAMS

The programmed track numbers and their order can be checked.

■ Stop program play and press the "M-check" button.

■ The track numbers and their order are indicated by each pressing of the "M-check" button.

NOTE: While the program play is stopped, keep the "M-check" button pressed. The auto memory check mode is activated, and the track numbers and their order are shown automatically. When all tracks in the program is checked, auto memory check mode is released.

TO CLEAR THE PROGRAMS

The tracks in the program can be erased.

■ Stop program play and press the "clear" button. Each pressing of the "clear" button clears one track at a time from the last programmed track.
■ To clear a track, call up and indicate the track number with the "M-check" button and press the "clear" button.
• To clear all tracks, press the STOP button twice. The PROGRAM indicator is turned off.

REPEAT

Play, program play, random play and auto scan can be repeated.

■ Press the "repeat" button. The REPEAT indicator is turned on.
■ To cancel the repeat function, press the "repeat" button again. The REPEAT indicator is turned off.

TO CHANGE THE TIME INDICATION

The elapsed or remaining time can be displayed.

■ Press the "T-display" button to select the time read-out desired.

SINGLE ELAPSED: To indicate the elapsed play time of a track
TOTAL ELAPSED: To indicate the elapsed play time of the whole disc
SINGLE REMAIN: To indicate the remaining play time of a track
TOTAL REMAIN: To indicate the remaining play time of the whole disc

• During random play, TOTAL ELAPSED and TOTAL REMAIN times can not be indicated and "-- --" appears. This is not a malfunction.
• When the VOLUME button is pressed, the time read-out is turned off and the volume level is indicated.
• During program operation, the total programmed play time is displayed.

EDIT PLAY

This feature is specifically intended to select and divide CD tracks, on the basis of timing, to fit the recording time on the A and B sides of any given tape cassette type. For instance, the EDIT function would be set to 30 minutes to fit both sides of a C-60 cassette. It divides a group of whole tracks, as closely as is possible, into two 30 minute sections. When the first side is recorded, the D-107u automatically stops so that the tape can be turned over in the cassette recorder. The 2nd half of the grouped tracks are then selected and the system restarted to record the 2nd side. Proceed as follows.

■ Set the unit to stop mode and press the "edit" button. The EDIT indicator blinks showing that the edit function is ready.

NOTE: When the RANDOM or PROGRAM indicator is turned on, pressing the "edit" button cancels the random or program mode.

■ Set the editing time of one side of the tape with the number buttons. (If it is a C-90, set the time to 45 minutes.)

NOTE: By setting the time of only one side, the tracks are edited for both sides.

■ When the edit time is set, the tracks to be recorded on both sides of the tape are automatically programmed. The EDIT indicator lights up.

NOTE: Some tracks may be excluded or some part of the tape may be blank due to difference between the track length and edit time.

■ To check the edited content, press the "edit" button for each side. The actucal tracks selected, along with their total playing (recording) time, will be shown in the display.
• Play can be started from the track indicated with the "edit" button.
■ You are now ready to begin recording. With the set of tracks selected for side A, press the Play button and at the same time place the cassette deck in record mode on side A.
When side A finishes, the D-107u will go into STOP mode.
■ Now press the Edit button to select the 2nd set of tracks intended for side B. Flip the cassette over in the cassette deck and initiate the play and record process as before.

[How to set the edit time]
When the edit time is within 10 minutes, press 1 to 10 of the number button. When it is more than 10 minutes, first press +10 for the 10 unit and 0 to 10 for units from 1 to 10.

FADE-OUT

This feature works through the motor driven level control and provides a smooth, computer controlled, precision fade out action. It is specially useful when making tape recordings from CD's. It is much more professional than manual fades and can be initiated at any playback point on a musical selection. It is fed to the VARIABLE OUTPUT jacks on the rear panel, and to the "phones" jacks.

NOTE: The fade-out function does not work with the FIXED OUTPUT jacks.

■ Press the FADE-OUT button during play.
■ The ╲ FADE OUT indicator blinks and the volume level will fade-out. When the volume level becomes minimum, the unit is set to pause mode.
• In pause mode, the FADE IN ╱ indicator blinks and the volume level gradually increases to the original level.
• The time needed for fade-out depends on the volume level. The higher the volume level is set, the longer time it takes.

TIME FADE-OUT

The time proceding the actual fade out (for the VARIABLE OUTPUT jacks and the "phones" jacks) can also be set.

NOTE: The time fade-out function does not work with the FIXED OUTPUT jacks.

NOTE: Time fade-out does not function in random play mode, or when higher than 32nd track in the disc is programmed.

■ Press the TIME FADE-OUT button.
■ Set the fade-out time with the number buttons.

NOTE: Time fade-out function does not work, if the preset time is longer than total elapsed time or total programmed time.

■ Press the PLAY button. The fade-out is activated a few seconds before the preset time. When fade-out is completed at the preset time, the unit is set to pause mode.

NOTE: To view the countdown time to the fade out point, set the T-Display to the "Total Remain" position.

• In pause mode, the FADE IN ╱ indicator blinks and the volume level gradually increases to the original level.
• The time needed for fade-out depends on the volume level. The higher the volume is set, the longer time it takes.

[How to set the time]
To activate fade-out within 10 minutes, press 1 to 10 of the number buttons. To activate it after 10 minutes or more, first press the +10 for the 10 unit and 0 to 10 for units from 1 to 10.

VOLUME CONTROL

The volume level from the VARIABLE OUTPUT and "phones" jacks can be adjusted.

■ Press the VOLUME "up" button [▭] to increase the volume (maximum –00 dB), or "down" [▭] to decrease it (minimum –70 dB, --- dB indicates that no sound is produced).
■ Usually set the volume at maximum (–00 dB), and adjust it if necessary.

TIME PLAY

Play can be started at the desired time with the timer function.

• Connect the power plug of the unit to be timer activated to the AC outlet of the timer.
■ Turn the power on and insert the compact disc.

NOTE: This unit keeps the memory of program, edit or random play for about 3 days, even if the power is turned off.
Therefore, the preset program, edit or random play starts when the power is turned on. When no program, edit or random play is preset, the play starts from the first track of the compact disc.

■ Set the start or stop time with the timer. Also, perform necessary operations on the units to be timer acitvated.
■ Set the power buttons of the units to be timer activated to on-position.
■ When the power is turned on with the timer and the vacuum tube becomes warm, activated unit is set to play mode.

REMOTE OPERATIONS

For reliable operation, use the hand-held remote within the basic dimnsional area (See on page 5.). To operate, select and press the individual buttons in the same manner as that described for the front panel buttons, referring to page 6 and 7.

Care & Maintenance

BATTERY REPLACEMENT

1. Open the battery compartment cover on the rear of the remote control unit. The cover should open easily if you press on it with your thumb.
2. Place two "AA" size dry batteries in the battery compartment in accordance with the diagram in the compartment, then replace the cover.

Incorrect use of batteries may lead to leakage or runpture. Always be sure to follow these guidelines:

A. Always insert batteries into the battery compartment correctly matching the positive (+) and negative (–) polarities as shown in the diagram inside the compartment.
B. Never mix new and used batteries together.
C. Both rechargeable and non-rechargeable batteries are available. Be sure to use your batteries in accordance with the instructions provided on the cells.

PRECAUTIONS

Condensation may occur inside the set if it is brought into a warm room from the cold or if a cold room is heated quickly. If this happens, drops of water may form on the pick-up, scattering the laser beam and hampering operation.

The extent of condensation depends on various conditions, but if condensation should occur, remove the disc then turn on the power and wait at least one hour before using the unit.

PROPER CARE OF COMPACT DISC

Improper handling of your disc will shorten its life.
Hold the disc so that you will not leave fingerprints on the surface of the disc.

When your disc is not in use, place it in the case and store it in a place away from the sun, high temperature, humidity, and dust. Should your disc require cleaning, use a clean soft cloth only. Do not use oil or chemically treated cloths.

CLEANING

The durable finish of the knobs and heavy aluminum front panel will last indefinitely with proper care and cleaning. Never use scouring pads, steel wool, scouring powders, or harsh chemical agents, such as lye solution. These will mar the finish. Clean with a soft, lintfree cloth or cotton swab slightly dampened with a mild solution of detergent and water.

REPACKING FOR SHIPMENT

Should it become necesary to ship your D-107u for any reason, use the original packing materials. If these are no longer available, be sure that adequate materials, at least equivalent to the original, are used.

REPAIRS

Only the most competent and qualified service technicians should be allowed to service the D-107u. The Luxman company and its factory-trained warranty station personnel have the knowledge and special equipment needed for repair and calibration of this precision instrument.

In the event of difficulty, call the Luxman Authorized Service Station nearest your home or business. In many cases, the dealer where you purchased your Luxman unit will be equipped to provide service.

Adjustment Procedures

1. Compact Disc Section

(1) Connections

(1) 接 続 図

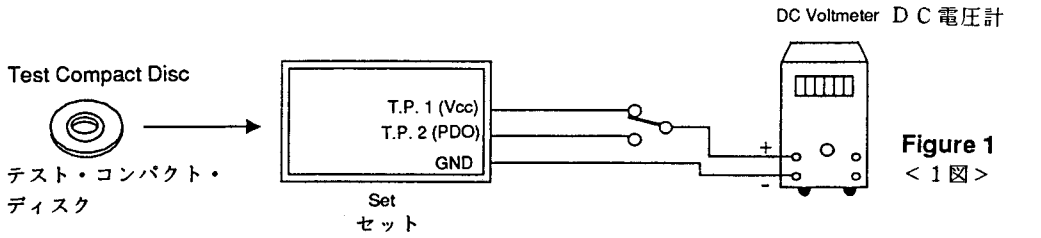


Figure 1
< 1 図 >

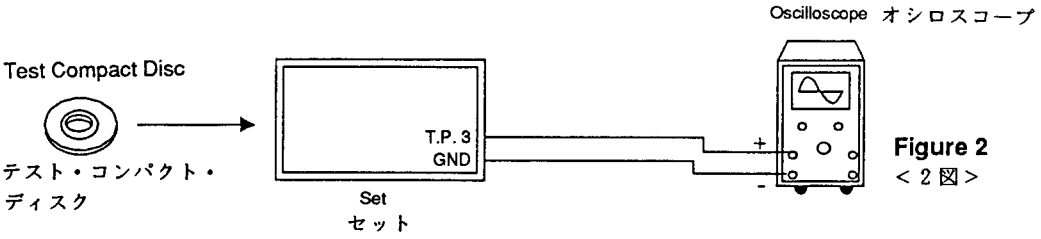


Figure 2
< 2 図 >

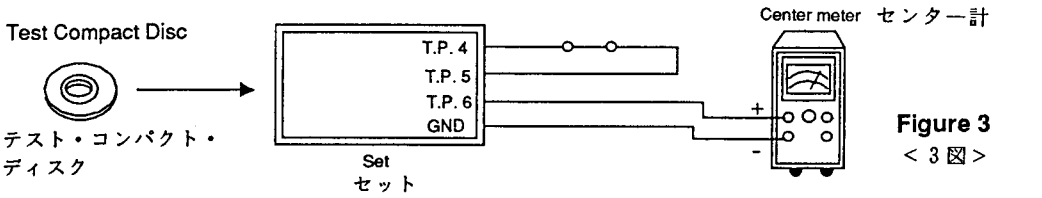


Figure 3
< 3 図 >

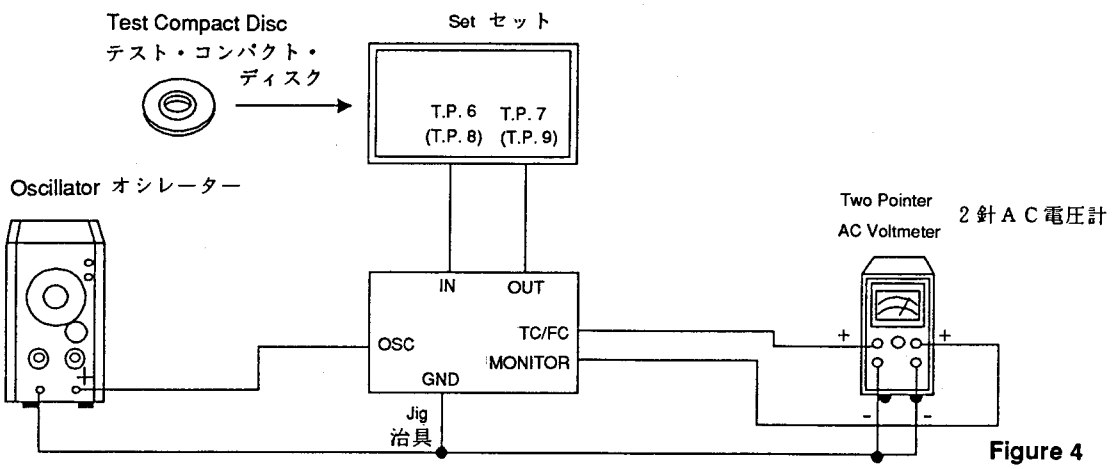


Figure 4
< 4 図 >

Note: Use the Jig which using for D-105u

注：D-105uに使った治具を使用する

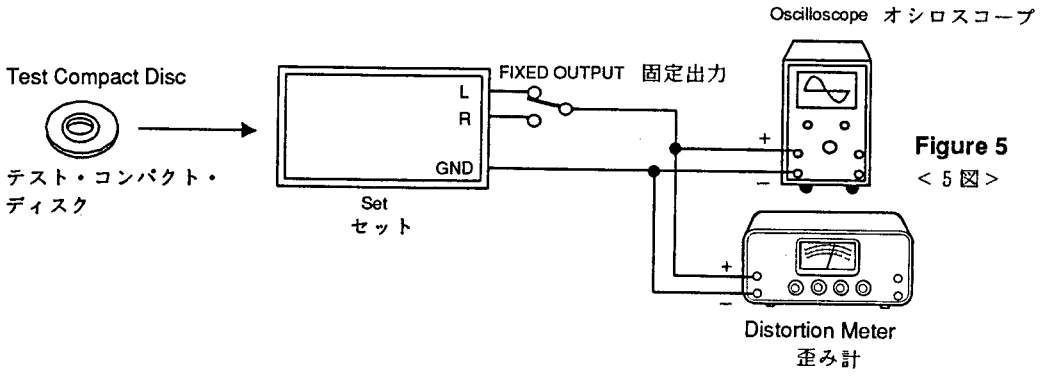


Figure 5
< 5 図 >

(2) Control Settings

Power Switch ..... ON
Play Switch ..... ON
Others Switch .....OFF

(3) Test CD

Tracking Error Balance Adjustment ..... SONY YEDS-18 (No7)
A-BEX TCD-782 (No8)
Level Linearity Adjustment ..... A-BEX TCD 781 (No26)
Others ..... SONY YEDS-18 (No2)
A-BEX TCD-782 (No2)

(4) Adjustment Procedures

Step	Description	Connections	Oscillator	Test Point	Adjustment
1	VCO Adjustment	Figure 1	—	T.P.1 T.P.2	Take measurement of the voltage at the T.P.1. Then adjust VR202 so that the output voltage at the T.P.2 becomes 1/2 ±10mV of the voltage at the T.P.1.
2	Focus Bias Adjustment	Figure 2	—	T.P.3	Adjust VR201 so that the T.P.3 (Eye pattern) signal is at its maximum, with a favorable Eye pattern as shown in Figure 6.
3	Tracking Error Balance Adjustment	Figure 3	—	T.P.4 T.P.5 T.P.6	After short circuiting between T.P.4 and T.P.5, turn VR204 fully counterclockwise. When the center meter is connected to the unit , the meter pointer will deflect between "a" and "b" as shown in Figure 7. Adjust VR203 until minimum deflection of the center meter shows "0". In this care, minimum deflection shows "0" stands for that "a". After the adjustment set VR204 to its center position.
4	Tracking Gain Adjustment	Figure 4	1kHz 100mV	T.P.6 T.P.7	Adjust VR204 so that both arms of the voltmeter come at the same position.
5	Focus Gain Adjustment	Figure 4	1kHz 100mV	T.P.8 T.P.9	Adjust VR205 so that both arms of the voltmeter come at the same position.
6	Level Linearity Adjustment	Figure 5	—	FIXOUT L(R)	Adjust the volume control (VR101) so that the output voltage at FIXOUT becomes 2V. (This point will be 0dB and used as the base.) Then adjust VR207 (VR208) so that the output voltage at FIXOUT becomes 70dB below the base and distortion becomes the minimum.

(2) スイッチ類のセット位置

電源スイッチ……ＯＮ
プレイスイッチ……ＯＮ
その他のスイッチ……ＯＦＦ

(3) テストＣＤ

トラッキング・エラー・バランス調整……SONY YEDS-18(No7)
A-BEX TCD-782(No8)
レベル直線性調整……A-BEX TCD-781(No26)
そ の 他……SONY YEDS-18(No2)
A-BEX TCD-782(No2)

(4) 調整方法

順序	調整項目	接続図	オシレーター	テストポイント	調整方法
1	ＶＣＯ調節	1図	−	T.P.1 T.P.2	T.P.1 の電圧を測定します。次に T.P.2の出力電圧が T.P.1の電圧の 1/2±10mVになるように VR202で調整します。
2	フォーカス バイアス調整	2図	−	T.P.3	T.P.3 （アイ・パターン）信号が最大になるように VR201 で調整します。望ましいアイ・パターンは6図に示しています。
3	トラッキングエラー バランス調整	3図	−	T.P.4 T.P.5 T.P.6	T.P.4 と T.P.5の間をショートした後， VR204を反時計方向にしぼりきります。センター計を装置に接続したとき，メータの針は7図に示すように，"a" と "b"の間で歪みます。センター計の最小歪みが "0" を示すまで VR203で調整します。この手順では最小歪みが "0"を示すということは，"a" を表します。調整後，VR204 を中央付近に戻します。
4	トラッキング ゲイン調整	4図	1 kHz 100mV	T.P.6 T.P.7	電圧計の２つの針が重なるように VR204で調整します。
5	フォーカス ゲイン調整	4図	1 kHz 100mV	T.P.8 T.P.9	電圧計の２つの針が重なるように VR205で調整します。
6	レベル直線性調節	5図	−	FIXOUT L(R)	FIXOUTの出力が２Ｖになる様ボリュームコントロール (VR101)で調整します。（この時０dBとする→基準）次にFIXOUTの出力が基準に対し－70dBかつ歪率が最小になる様 VR207 (VR208)を調整します。

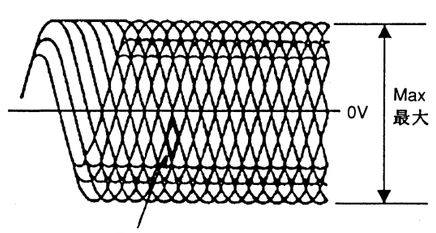


Figure 6
< 6 図 >

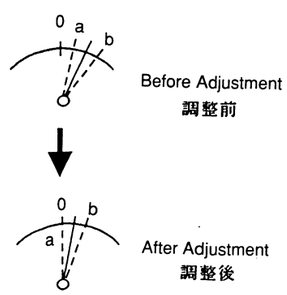
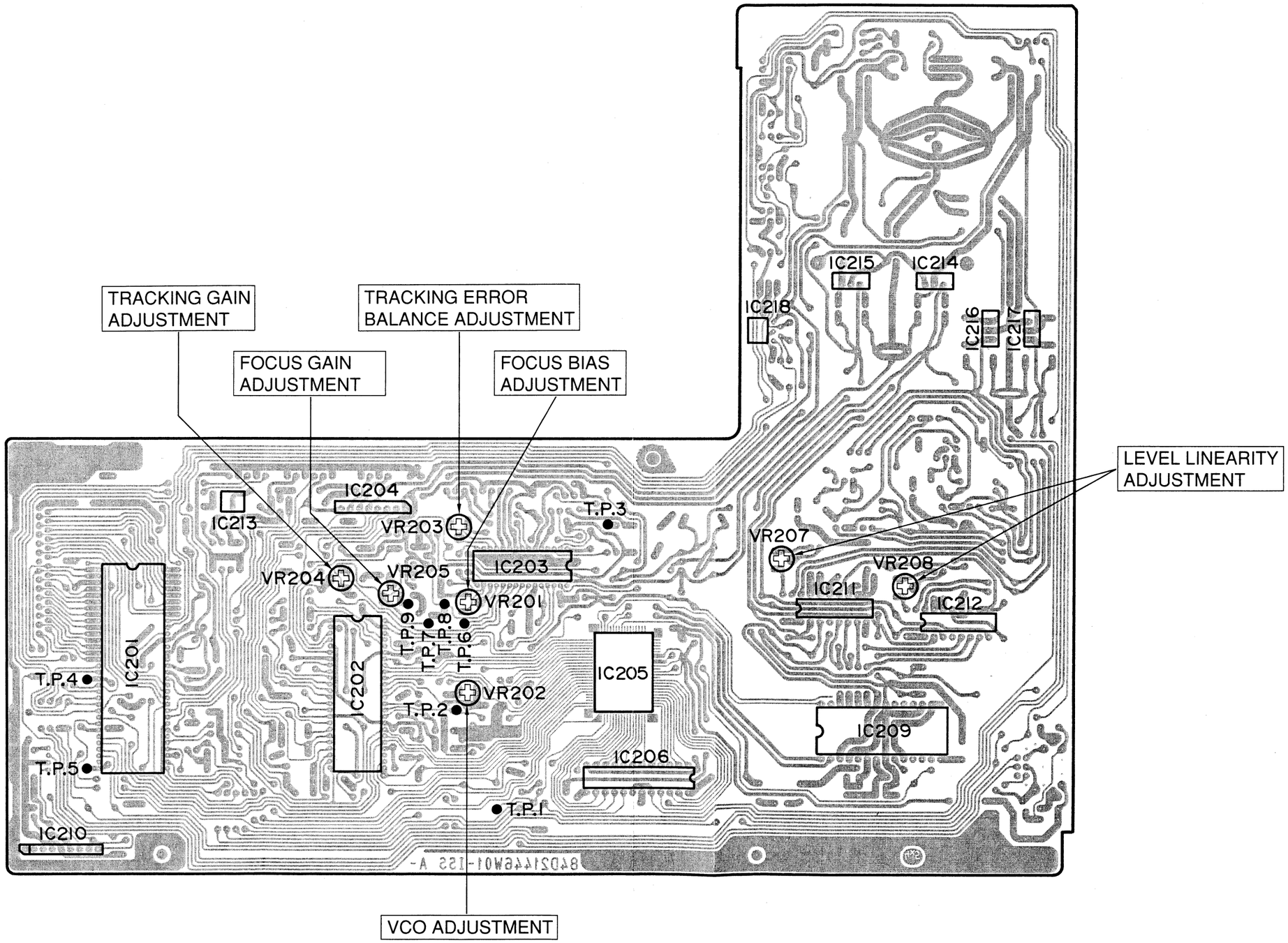
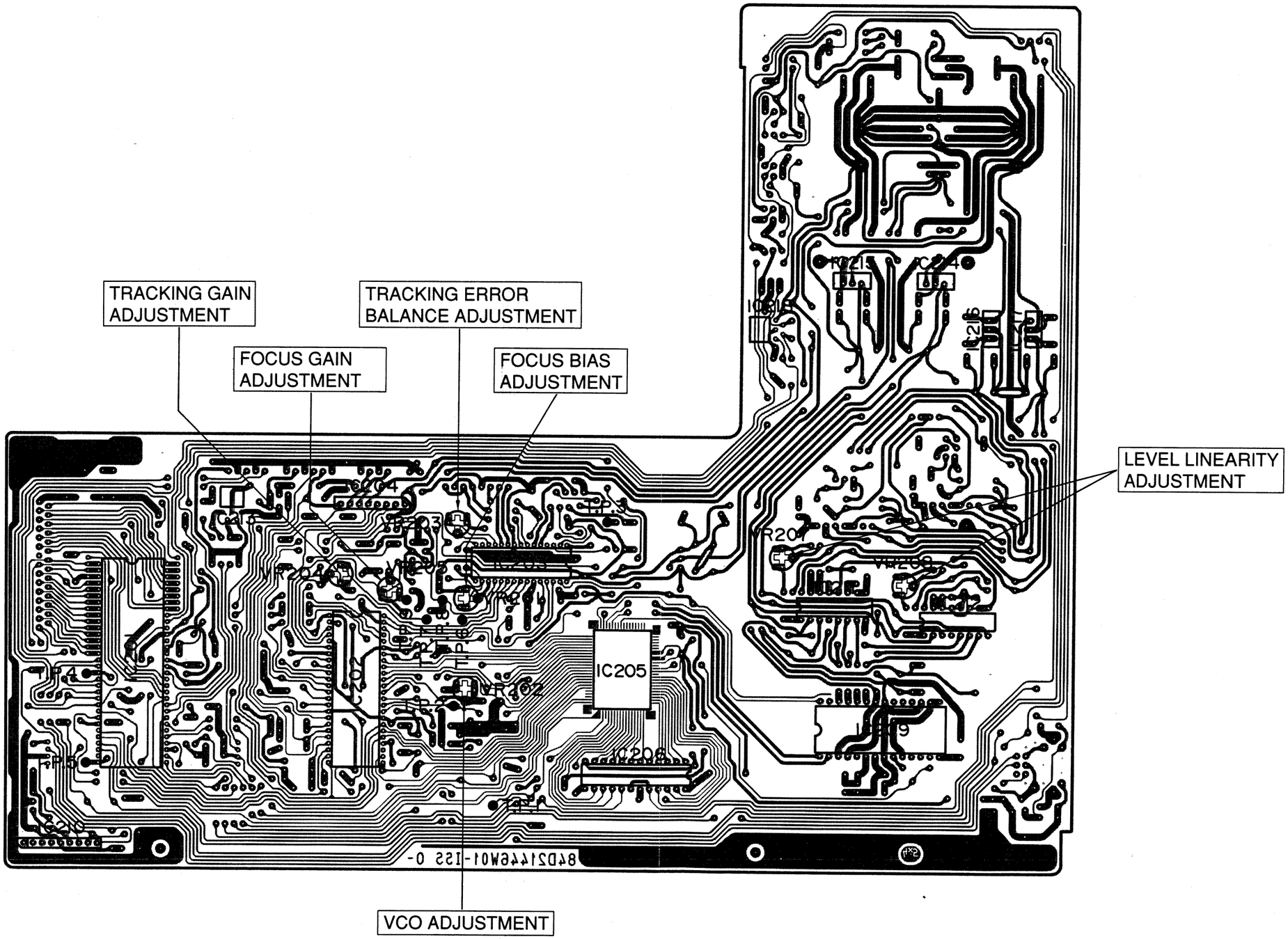


Figure 7
< 7 図 >

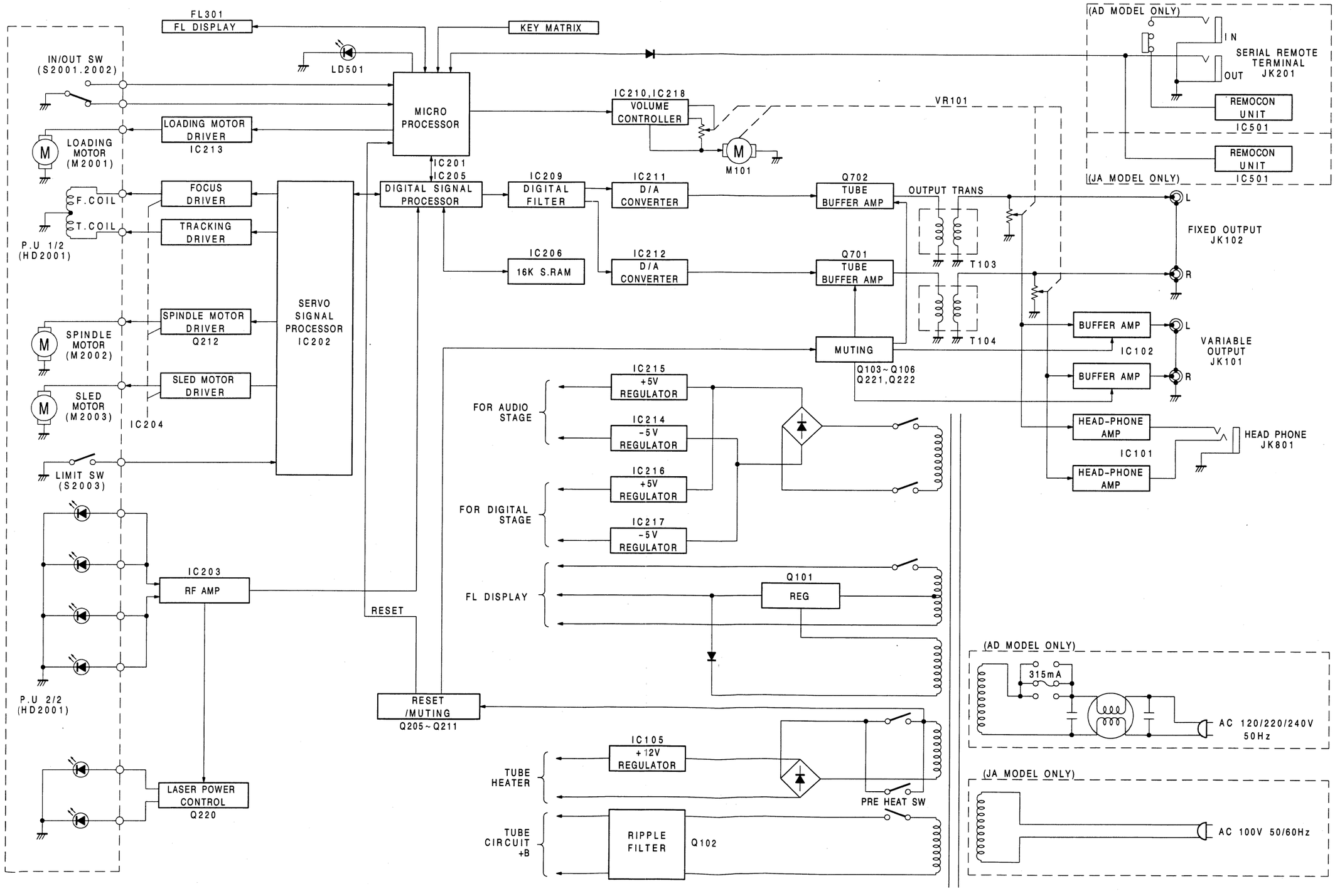
Adjustment Locations (AD)



Adjustment Locations (JA)



Block Diagram



Schematic Diagram (1/3)<AD model>

IC'S	IC105
TRANSISTORS (Q)	Q101

FL/KEY SW P.C.Board

FL301 FV335G

FADE P.C.Board

S901 T.FADE OUT
S902 VOL.DOWN
S903 VOL.UP
S904 FADE-OUT
CH901
CB302

S328 BACKWARD
S323 PLAY
S321 PAUSE
S319 STOP
S318 EDIT
S313 RANDOM
S310 M-CHECK
S307 A-SCN
S304 A-PAUSE
S301 REPEAT
S329 DISP.ADJ
S327 FORWARD
S324 OPEN/CLOSE
S322 PROGRUM
S320 CLEAR
S317 +10
S314 10
S311 9
S308 8
S305 7
S302 6
S330 TIME-DISP
S328 SKIP-DOWN
S325 SKIP-UP
S318 5
S315 4
S312 3
S309 2
S306 1
S303 0

CH301
L302
R301 R302 R303 R304 R305 R306 R307 R308 R309 R310 R311 R312 R313 R314 R315 R316 R317 R318 R319 R320 R321 R322 R323 R324 R325 R326 R327 R328 R329 R330 R331 R332 R333 R334 R335 R336 R337 R338 R339 R340 R341 R342 R343 R344 R345 R346 R347 R348 R349 R350 R351 R352 R353 R354 R355 R356 R357 R358 R359 R360 R361 R362 R363 R364 R365 R366 R367 R368 R369 R370 R371 R372 R373 R374 R375 R376 R377 R378 R379 R380 R381 R382 R383 R384 R385 R386 R387 R388 R389 R390 R391 R392 R393 R394 R395 R396 R397 R398 R399 R400 R401 R402 R403 R404 R405 R406 R407 R408 R409 R410 R411 R412 R413 R414 R415 R416 R417 R418 R419 R420 R421 R422 R423 R424 R425 R426 R427 R428 R429 R430 R431 R432 R433 R434 R435 R436 R437 R438 R439 R440 R441 R442 R443 R444 R445 R446 R447 R448 R449 R450 R451 R452 R453 R454 R455 R456 R457 R458 R459 R460 R461 R462 R463 R464 R465 R466 R467 R468 R469 R470 R471 R472 R473 R474 R475 R476 R477 R478 R479 R480 R481 R482 R483 R484 R485 R486 R487 R488 R489 R490 R491 R492 R493 R494 R495 R496 R497 R498 R499 R500 R501 R502 R503 R504 R505 R506 R507 R508 R509 R510 R511 R512 R513 R514 R515 R516 R517 R518 R519 R520 R521 R522 R523 R524 R525 R526 R527 R528 R529 R530 R531 R532 R533 R534 R535 R536 R537 R538 R539 R540 R541 R542 R543 R544 R545 R546 R547 R548 R549 R550 R551 R552 R553 R554 R555 R556 R557 R558 R559 R560 R561 R562 R563 R564 R565 R566 R567 R568 R569 R570 R571 R572 R573 R574 R575 R576 R577 R578 R579 R580 R581 R582 R583 R584 R585 R586 R587 R588 R589 R590 R591 R592 R593 R594 R595 R596 R597 R598 R599 R600 R601 R602 R603 R604 R605 R606 R607 R608 R609 R610 R611 R612 R613 R614 R615 R616 R617 R618 R619 R620 R621 R622 R623 R624 R625 R626 R627 R628 R629 R630 R631 R632 R633 R634 R635 R636 R637 R638 R639 R640 R641 R642 R643 R644 R645 R646 R647 R648 R649 R650 R651 R652 R653 R654 R655 R656 R657 R658 R659 R660 R661 R662 R663 R664 R665 R666 R667 R668 R669 R670 R671 R672 R673 R674 R675 R676 R677 R678 R679 R680 R681 R682 R683 R684 R685 R686 R687 R688 R689 R690 R691 R692 R693 R694 R695 R696 R697 R698 R699 R700 R701 R702 R703 R704 R705 R706 R707 R708 R709 R710 R711 R712 R713 R714 R715 R716 R717 R718 R719 R720 R721 R722 R723 R724 R725 R726 R727 R728 R729 R730 R731 R732 R733 R734 R735 R736 R737 R738 R739 R740 R741 R742 R743 R744 R745 R746 R747 R748 R749 R750 R751 R752 R753 R754 R755 R756 R757 R758 R759 R760 R761 R762 R763 R764 R765 R766 R767 R768 R769 R770 R771 R772 R773 R774 R775 R776 R777 R778 R779 R780 R781 R782 R783 R784 R785 R786 R787 R788 R789 R790 R791 R792 R793 R794 R795 R796 R797 R798 R799 R800 R801 R802 R803 R804 R805 R806 R807 R808 R809 R810 R811 R812 R813 R814 R815 R816 R817 R818 R819 R820 R821 R822 R823 R824 R825 R826 R827 R828 R829 R830 R831 R832 R833 R834 R835 R836 R837 R838 R839 R840 R841 R842 R843 R844 R845 R846 R847 R848 R849 R850 R851 R852 R853 R854 R855 R856 R857 R858 R859 R860 R861 R862 R863 R864 R865 R866 R867 R868 R869 R870 R871 R872 R873 R874 R875 R876 R877 R878 R879 R880 R881 R882 R883 R884 R885 R886 R887 R888 R889 R890 R891 R892 R893 R894 R895 R896 R897 R898 R899 R900 R901 R902 R903 R904 R905 R906 R907 R908 R909 R910 R911 R912 R913 R914 R915 R916 R917 R918 R919 R920 R921 R922 R923 R924 R925 R926 R927 R928 R929 R930 R931 R932 R933 R934 R935 R936 R937 R938 R939 R940 R941 R942 R943 R944 R945 R946 R947 R948 R949 R950 R951 R952 R953 R954 R955 R956 R957 R958 R959 R960 R961 R962 R963 R964 R965 R966 R967 R968 R969 R970 R971 R972 R973 R974 R975 R976 R977 R978 R979 R980 R981 R982 R983 R984 R985 R986 R987 R988 R989 R990 R991 R992 R993 R994 R995 R996 R997 R998 R999 R1000

D301 1SS270A D302 1SS270A D303 1SS270A D304 1SS270A D305 1SS270A D306 1SS270A D307 1SS270A D308 1SS270A D309 1SS270A D310 1SS270A D311 1SS270A D312 1SS270A

TO CB212 MAIN P.C.Board

PICK UP

HD2001

TO CB204 MAIN P.C.Board

PHOTO DIODE

TO CB205 MAIN P.C.Board

FOCUS COIL
TRACKING COIL

TO CB203 MAIN P.C.Board

ASSY MECH

M2001 LOADING MOTOR
C2001 0.022
S2002 OPEN/CLOSE SW
S2001
TO CB201 MAIN P.C.Board

M2002 SPINDLE MOTOR
S2003 LIMIT SW
TO CB202 MAIN P.C.Board

M2003 SLED MOTOR

POWER SUPPLY P.C.Board

P101 120-240V 50Hz PLUG,CORD
T101 TRANS POWER 120V 220V 240V 0V
F102 315mA
S101 POWER
L101
C101 0.01 C102 0.01 C103 0.01 C104 0.47/100 C105 0.1 C106 330/25 C107 4700P C108 330/50 C109 330/25 C110 1000/25 C111 1000/50 C112 330/25 C113 330/25 C114 1000/50 C115 330/25 C116 330/25 C117 330/25 C118 330/25 C119 330/25 C120 330/25 C121 330/25 C122 330/25 C123 330/25 C124 330/25 C125 330/25 C126 330/25 C127 330/25 C128 330/25 C129 330/25 C130 330/25 C131 330/25 C132 330/25 C133 330/25 C134 330/25 C135 330/25 C136 330/25 C137 330/25 C138 330/25 C139 330/25 C140 330/25 C141 330/25 C142 330/25 C143 330/25 C144 330/25 C145 330/25 C146 330/25 C147 330/25 C148 330/25 C149 330/25 C150 330/25 C151 330/25 C152 330/25 C153 330/25 C154 330/25 C155 330/25 C156 330/25 C157 330/25 C158 330/25 C159 330/25 C160 330/25 C161 330/25 C162 330/25 C163 330/25 C164 330/25 C165 330/25 C166 330/25 C167 330/25 C168 330/25 C169 330/25 C170 330/25 C171 330/25 C172 330/25 C173 330/25 C174 330/25 C175 330/25 C176 330/25 C177 330/25 C178 330/25 C179 330/25 C180 330/25 C181 330/25 C182 330/25 C183 330/25 C184 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D101 IN4003 D102 IN4007 D103 IN4003 D104 IN4003 D105 IN4003 D106 IN4003 D107 IN4003 D108 IN4003

Q101 2SA1358
Q102 2SC2752

FL REGULATOR
REGULATOR
IC105 μPC2412HF
INPUT OUTPUT GND
START REFERENCE VOLTAGE OVERHEAT PROTECT ERROR AMP AMP SAFETY OVER CURRENT
RIPPLE FILTER

TO CB213 MAIN P.C.Board
TO CB211 MAIN P.C.Board
TO CB210 MAIN P.C.Board

PRE HEAT SW P.C.Board
S601 PRE HEAT SW
CH601

TO CB209 MAIN P.C.Board

TUBE P.C.Board(2)
TUBE
CB401 CB402 CB403 CB404 CH401 CH402 CH403 CH701 CH702

CB101 CB102 CB103 CB106

IC501

IC101 IC102

Q103
Q104 Q105
Q106

Q701 Q702

Q107 Q108

M2001
LOADING MOTOR

C2001
0.022

LDG+
LDG-
OPEN SW
COM
CLOSE SW

S2002
OPEN/CLOSE SW

S2001

Ⓘ
TO CB201
MAIN
P.C.Board

M2002
SPINDLE MOTOR

SPD-
SPD+
L SW
L SW
SLD+
SLD-

S2003
LIMIT SW

Ⓙ
TO CB202
MAIN
P.C.Board

M2003
SLED MOTOR

REMOTE P.C.Board

IC501
GP1U521

REMOTE CONTROL UNIT

AMP
LIMITER
B.P.F
DEMODU-RATOR
INTEG-RATOR
COMPA-RATOR
VCC
LD501
C501
0.1
CH501

Ⓝ
TO CB206
MAIN
P.C.Board

(OUTPUT L)
(OUTPUT R)

TUBE P.C.Board(1)

Q701
6CG7

Q702
6CG7

T103
T104
CB106
CB107
CH106
R139
91K
R140
91K

Ⓚ
TO CB215
MAIN
P.C.Board

Ⓛ
TO CB207
MAIN
P.C.Board

CH104
CH105
CH103

Ⓜ
TO CB208
MAIN
P.C.Board

R111
3.3K
VR101-1
VR101-2
10KB
VR101-3
R127
100K
R128
100K
C103
0.1
R129
22
M101

Q103
2SD1302

R123
330-1/2W
R124
330-1/2W
D119
1SS270A
D117
1SS270A
R125
6.2K
D118
1SS270A
D116
1SS270A
R126
6.2K
C111
100PF
C110
100PF
JK102-1
L-CH
(OUT-FIXED)
JK102-2
R-CH

MUTING

BUFFER AMP

IC102
NJM4580DD

Q104
2SD1302

Q105
2SD1302

D111
1SS270A
D114
1SS270A
R117
6.2K
D115
1SS270A
D110
1SS270A
R118
6.2K
C113
820P
C112
820P
JK101-1
L-CH
(OUT-VARIABLE)
JK101-2
R-CH

MUTING

Q106
2SD1302

R141
6.2K
R142
6.2K
R113
330
R114
330
C106
0.47/100
C105
0.47/100

IC101
M5216P

HEAD PHONE AMP

R107
1K
R108
1K
R109
56
R110
56
R130
220K

Q107
2SD1302

Q108
2SD1302

D104
1SS270
D112
1SS270A
R137
5.6K
D103
1SS270
D113
1SS270A
R138
5.6K

MUTING

CB104
CH801
C803
820P
C802
820P
C801
0.1
JK801
HEAD PHONE

HEAD PHONE
P.C.Board

CB401
CH701
CH702
CB402

R417
110
R418
110
R415
1K
R416
1K
C407
3.3
C408
3.3
R407
620
R408
620
R411
33K
R412
33K
R409
820K
R410
820K
C701
E701
10/100
R705
2-1/2W
R706
2-1/2W
R701
4.7

D-107U

Schematic Diagram (1/3)<JA model>

IC'S	IC105
TRANSISTORS (Q)	Q101 Q102 Q701 Q7

FL/KEY SW P.C.Board

FL301 FV335G

FADE P.C.Board

S901 T FADE OUT
S902 VOL.DOWN
S903 VOL.UP
S904 FADE-OUT

S328 BACKWARD
S323 PLAY
S321 PAUSE
S319 STOP
S316 EDIT
S313 RANDOM
S310 M-CHECK
S307 A-SCN
S304 A-PAUSE
S301 REPEAT
S329 DISP.ADJ
S327 FORWARD
S324 OPEN/CLOSE
S322 PROGRUM
S320 CLEAR
S317 +10
S314 10
S311 9
S308 8
S305 7
S302 6
S330 TIME-DISP
S328 SKIP-DOWN
S325 SKIP+UP
S318 5
S315 4
S312 3
S309 2
S306 1
S303 0

TO CB212 MAIN P.C.Board

PICK UP

HD2001

TO CB204 MAIN P.C.Board
TO CB205 MAIN P.C.Board
TO CB203 MAIN P.C.Board

ASSY MECH

M2001 LOADING MOTOR
M2002 SPINDLE MOTOR
M2003 SLED MOTOR
S2003 LIMIT SW

TO CB201 MAIN P.C.Board
TO CB202 MAIN P.C.Board

POWER SUPPLY P.C.Board

P101 100V ONLY 50/60Hz PLUG,AC CORD
T101 TRANS POWER 100V
S101 POWER
FL REGULATOR
Q101 2SA1358
REGULATOR
IC105 μPC2412HF
INPUT
OUTPUT
START
REFERENCE VOLTAGE
OVERHEAT PROTECT
ERROR AMP
AMP
SAFETY
OVER CURRENT
GND
RIPPLE FILTER
Q102 2SC2752

TO CB213 MAIN P.C.Board
TO CB211 MAIN P.C.Board
TO CB210 MAIN P.C.Board

PRE HEAT SW P.C.Board

S601 PRE HEAT SW

TO CB209 MAIN P.C.Board

TUBE P.C.Board(2)

TUBE P.C

IC501

IC101 IC102

Q103
Q105 Q104
Q106

Q701 Q702

Q107 Q108

M2001
LDING MOTOR

C2001
0.022

LDG+
LDG-
OPEN SW
COM
CLOSE SW

TO CB201
MAIN
P.C.Board

M2002
NDLE MOTOR

SPD-
SPD+
L SW
L SW
SLD+
SLD-

TO CB202
MAIN
P.C.Board

M2003
LED MOTOR

REMOTE P.C.Board

IC501
GP1U521

REMOTE
CONTROL
UNIT

AMP
LIMITER
B.P.F
DEMODU-
RATOR
INTEG-
RATOR
COMPA-
RATOR
VCC

LD501

C501
0.1

CH501

TO CB206
MAIN
P.C.Board

T103
T104

CB106
CB107
CH106

R139
91K
R140
91K

<OUTPUT L>
<OUTPUT R>

TO CB215
MAIN
P.C.Board

TO CB207
MAIN
P.C.Board

CH104

R121 51-2W

R111
3.3K

VR101-1
VR101-2
10KB
VR101-3
100KB

R127
100K
R128
100K

C103
0.1
R129
2K

CH105
CH103

M101

TO CB208
MAIN
P.C.Board

R123
330
R124
330

Q103
2SD1996
Q104
2SC3421

JK102-1
L-CH
(OUT-FIXED)
JK102-2
R-CH

BUFFER
AMP

IC102
NJM4580DD

Q103
R125
22K
Q104
MUTING

RL101

C107
0.47
R116
2.2K

R141
6.2K
R142
6.2K

Q105
2SD1996

R113
330
R117
22K
D114
1SS270A
D111
1SS270A
R115
470K
R116
470K
MUTING
R114
330
R118
22K
D110
1SS270A
D115
1SS270A

Q106
2SD1996

JK101-1
L-CH
(OUT-VARIABLE)
JK101-2
R-CH

C109
0.47

R130
220K

IC101
M5216P

HEAD PHONE
AMP

R107
5.1K
R108
5.1K

R109
56
R110
56

Q107
2SD1302

D104
1SS270
D112
1SS270
R137
5.6K

Q108
2SD1302

D103
1SS270
D113
1SS270
R138
5.6K

MUTING

CB104

HEAD PHONE
P.C.Board

CH801

C801
0.1

JK801
HEAD PHONE

TUBE P.C.Board(1)

Q701
6CG7GE

Q702
6CG7GE

CB401
CB402
CH701
CH702

C407
3.3
C408
3.3

R407
820
R408
820
R409
820K
R410
820K

E701
10/100

R705
2.4K/2W
R706
2.4K/2W
R701
4.7

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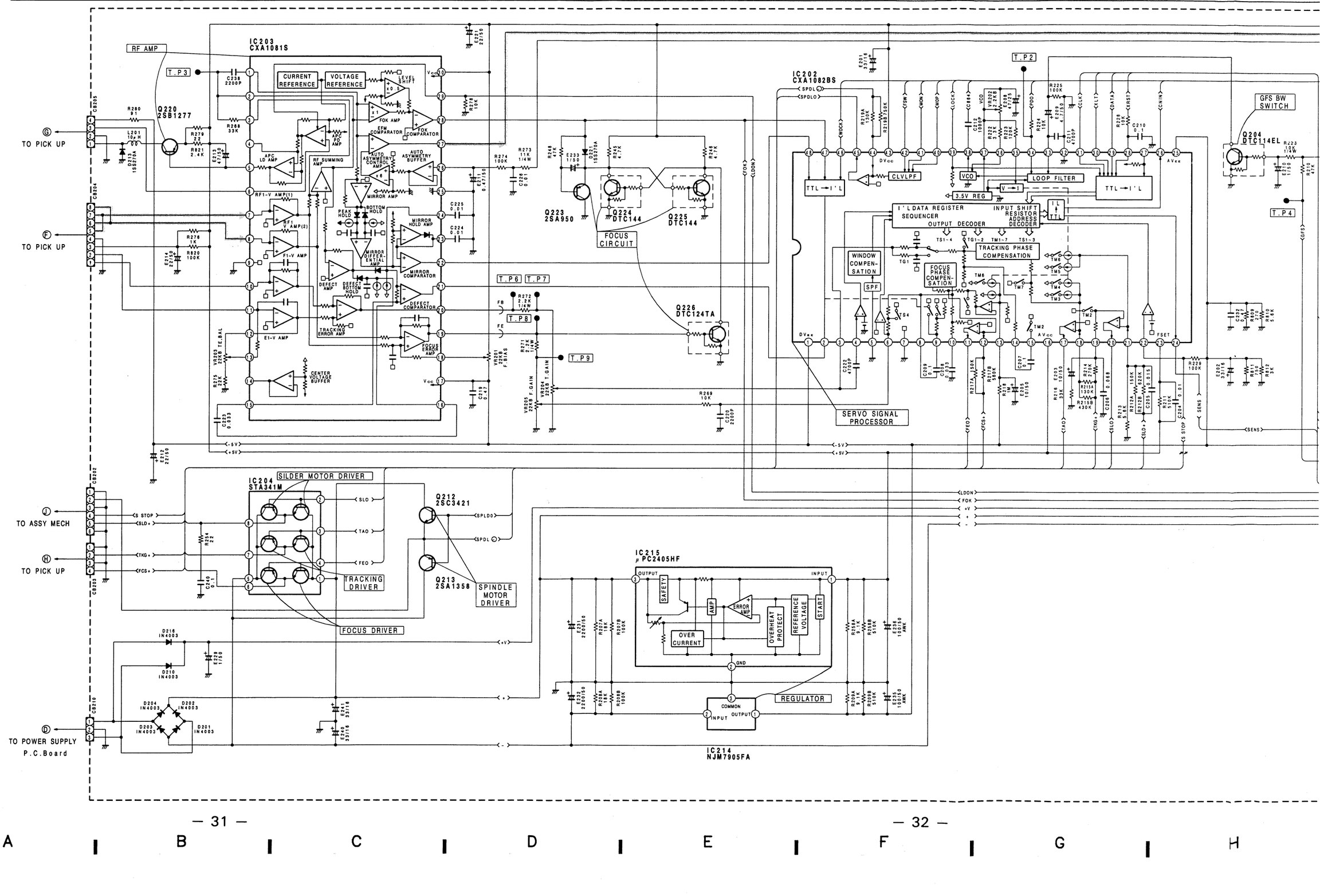
H I J K L M N O P

Schematic Diagram(2/3)<AD model>

IC'S	IC203 IC204	IC215	IC214	IC202
TRANSISTORS (Q)	Q220 Q212 Q213	Q223 Q224	Q225 Q226	Q204



IC205
CXD1125QZ

GFS BW SWITCH

Q204
DTC114EL

SUBCODE SYNC DETECTOR
SUBCODE DEMODULATOR
SUBCODE Q REGISTER
EFM-PLL
23-BIT SHIFT REGISTER
EFM DEMODULATOR
FRAME SYNC DETECTOR/ PROTECTOR/ INSERTER
CLV SERVO CONTROL
ERROR DETECTOR/ CORRECTOR
INTER-POLATOR
VCO CIRCUIT TIMING GENERATOR
X'TAL CIRCUIT TIMING GENERATOR
DIGITAL FILTER (CXD1130Q) (CXD1135Q)
SELECTOR
TRACKING COUNTER
CPU INTERFACE
RAM ADDRESS GENERATOR
DIGITAL OUT (CXD1125Q) (CXD1135Q)
DIGITAL SIGNAL PROCESSOR

IC209
SM5813AP

DIGITAL FILTER
INPUT INTER FACE
FILTER OPERATION
OUTPUT INTERFACE
SYSTEM CLOCK
TIMING CONTROL

IC211
AD1860

IC212
AD1860

D/A CONVERTER
18-BIT DAC
18-BIT LATCH
SERIAL INPUT REGISTOR
CONTROL LOGIC
I OUT
A GND

Q221
2SD1302

Q222
2SD1302

MUTING

IC216
NJM7805FA

IC217
NJM7905FA

REGULATOR

IC206
LC3516AS
16K S-RAM
ADDRESS BUFFER
INPUT DATA BUFFER
INPUT DATA CON-TROLER
COLUMN DECODER
SENS AMP
OUTPUT DATA BUFFER
DECODER
MEMORY CELL ALLEY 128x128

CB209
CB215

TO CB403
CB404
TUBE
P.C.Board(2)

TO CH106
POWER SUPPLY
P.C.Board

TO 3/3
MAIN
P.C.Board

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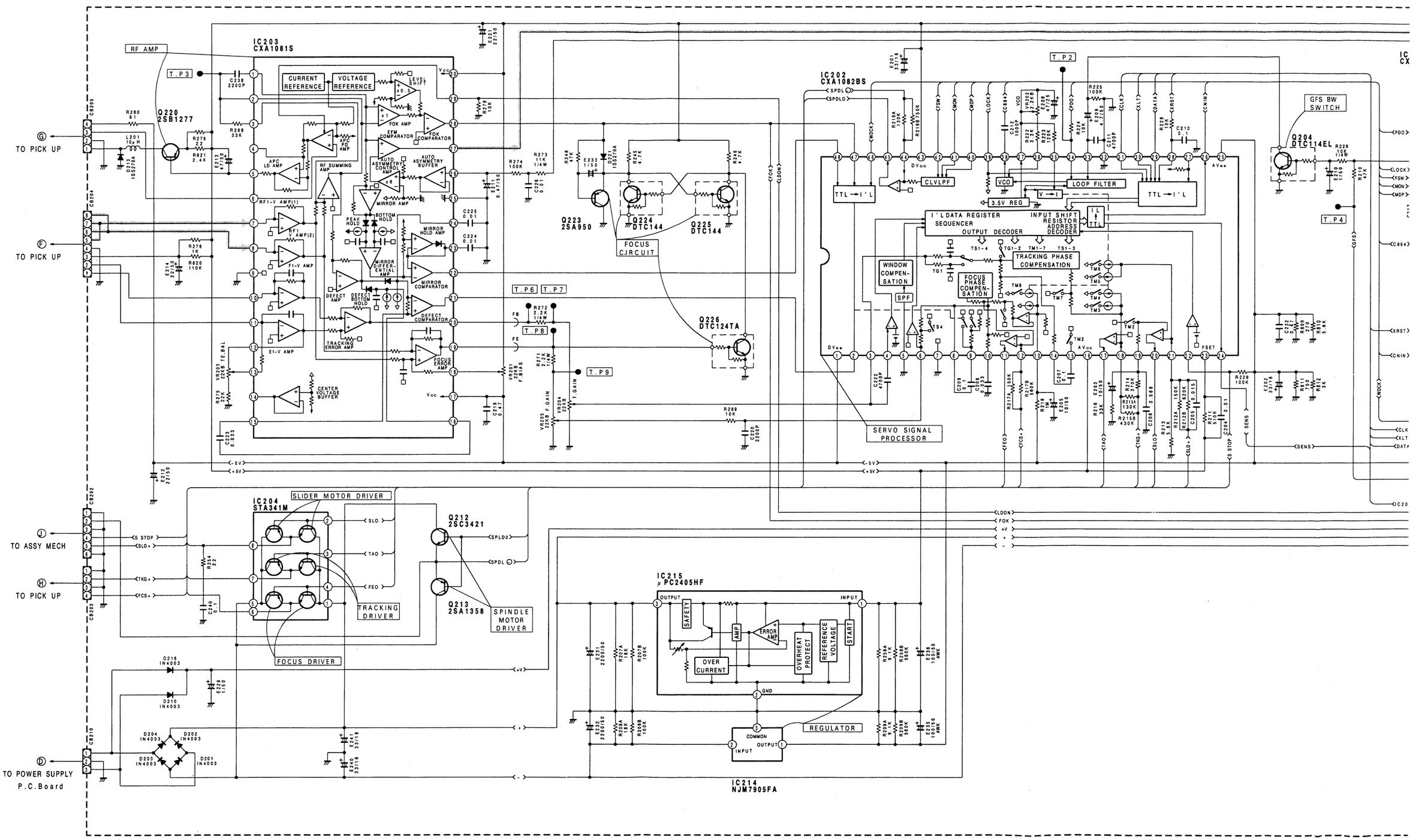
Schematic Diagram(2/3)<JA model>

IC'S	IC203 IC204	IC215	IC214	IC202
TRANSISTORS (Q)	Q220 Q212 Q213	Q223 Q224	Q225 Q226	Q204



IC205 CXD1125QZ

IC206 LC3516AS

IC209 SM5813AP

IC211 AD1860

IC212 AD1860

IC216 NJM7805FA

IC217 NJM7905FA

Q204 DTC114EL

Q221 2SD1302

Q222 2SD1302

GFS BW SWITCH

DIGITAL SIGNAL PROCESSOR

SUBCODE SYNC DETECTOR

SUBCODE DEMODULATOR

SUBCODE Q REGISTER

EFM-PLL

23-BIT SHIFT REGISTER

EFM DEMODULATOR

CLV SERVO CONTROL

FRAME SYNC DETECTOR/ PROTECTOR/ INSERTER

ERROR DETECTOR/ CORRECTOR

VCO CIRCUIT TIMING GENERATOR

INTER-POLATOR

X'TAL CIRCUIT TIMING GENERATOR

DIGITAL FILTER (CXD1130Q) (CXD1135Q)

SELECTOR

TRACKING COUNTER

CPU INTERFACE

RAM ADDRESS GENERATOR

DIGITAL OUT (CXD1125Q) (CXD1135Q)

DIGITAL FILTER

INPUT INTERFACE

FILTER OPERATION

OUTPUT INTERFACE

SYSTEM CLOCK

TIMING CONTROL

D/A CONVERTER

18-BIT DAC

18-BIT LATCH

SERIAL INPUT REGISTOR

CONTROL LOGIC

MUTING

REGULATOR

16K S-RAM

ADDRESS BUFFER

INPUT DATA BUFFER

INPUT DATA CON-TROLER

COLUMN DECODER SENS AMP

OUTPUT DATA BUFFER

DECODER

MEMORY CELL ALLEY 128x128

TO CB403 CB404 TUBE P.C.Board(2)

TO CH106 POWER SUPPLY P.C.Board

TO 3/3 MAIN P.C.Board

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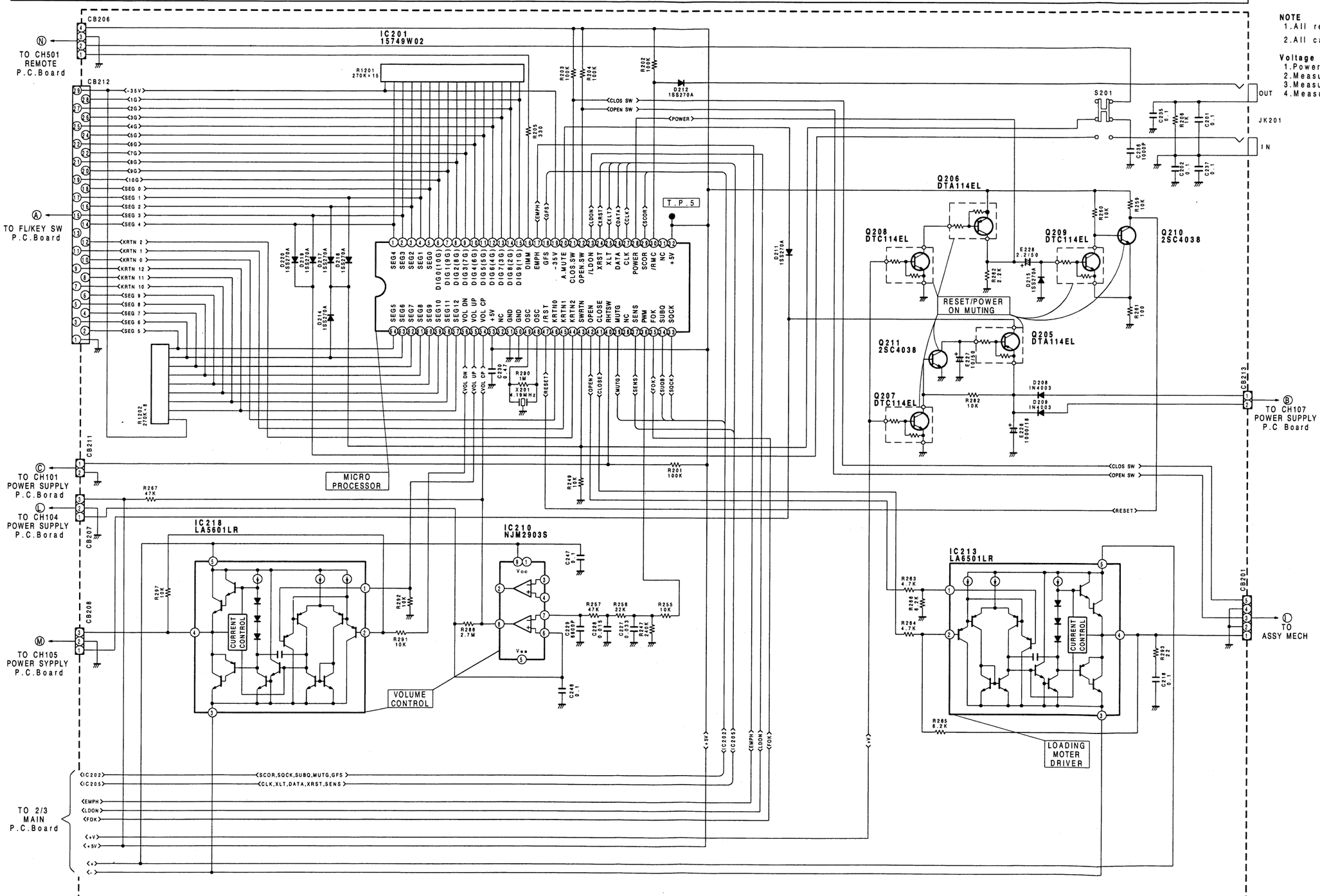
Schematic Diagram(3/3)〈AD model〉

IC'S	IC201 IC218 IC210 IC213
TRANSISTORS (Q)	Q208 Q207 Q206 Q211 Q205 Q209 Q210



NOTE

1. All resistance values are in ohms. K=
2. All capacitance values are in microfarads.

Voltage Measuring Conditions

1. Power Supply Voltage :AC120/220/24
2. Measuring Meter :Digital Mult
3. Measuring Point Reference :Between Grou
4. Measuring Conditions :NO Signal In
   AT Play Mode
   (Use the 2nd t

IC201

1	-29.3V	33	5V
2	-22.6V	34	1.4V
3	-27V	35	4.9V
4	-27V	36	0V
5	-22.6V	37	4.8V
6	-32.8V	38	—
7	-32.8V	39	0V
8	-32.8V	40	0V
9	-32.8V	41	0V
10	-32.8V	42	0V
11	-32.8V	43	2.2V
12	-32.8V	44	-19V
13	-32.8V	45	-19.1V
14	-32.8V	46	-18.7V
15	-32.8V	47	0V
16	0V	48	2.3V
17	-7.6V	49	2.3V
18	4.8V	50	0V
19	-35.8V	51	0V
20	-7.4V	52	—
21	0V	53	5V
22	5V	54	0V
23	0.4V	55	0V
24	5V	56	0V
25	5V	57	-22.2V
26	1.4V	58	-24.2V
27	1.4V	59	-23.6V
28	4.9V	60	-17.1V
29	0V	61	-10.1V
30	4.8V	62	-15.6V
31	—	63	-22.5V
32	5V	64	-29.8V

IC205

1	0V	41	2.4V
2	-4.8V	42	2.4V
3	2.5V	43	2.4V
4	2.7V	44	2.5V
5	2.4V	45	2.5V
6	2.6V	46	2.8V
7	4.9V	47	2V
8	2.4V	48	2V
9	2.4V	49	4.3V
10	0V	50	2.6V
11	1.5V	51	—
12	0V	52	0V
13	4.9V	53	2.3V
14	5V	54	—
15	1.4V	55	0V
16	5V	56	4.9V
17	0V	57	4.9V
18	4.8V	58	0V
19	0V	59	0V
20	—	60	—
21	—	61	—
22	—	62	—
23	1.4V	63	—
24	0V	64	—
25	5V	65	—
26	4.9V	66	—
27	2.3V	67	—
28	4.9V	68	—
29	2V	69	—
30	1.9V	70	—
31	1.9V	71	—
32	1.9V	72	—
33	4.9V	73	4.9V
34	1.9V	74	—
35	1.9V	75	—
36	1.9V	76	2.3V
37	1.9V	77	—
38	2.4V	78	2.5V
39	2.4V	79	2.4V
40	2.4V	80	2.5V

	IC105	IC214	IC215	IC216
1	15.7V	-4.9V	5.7V	5V
2	0V	-12.8V	0V	0V
3	11.9V	0V	12V	12V

IC203

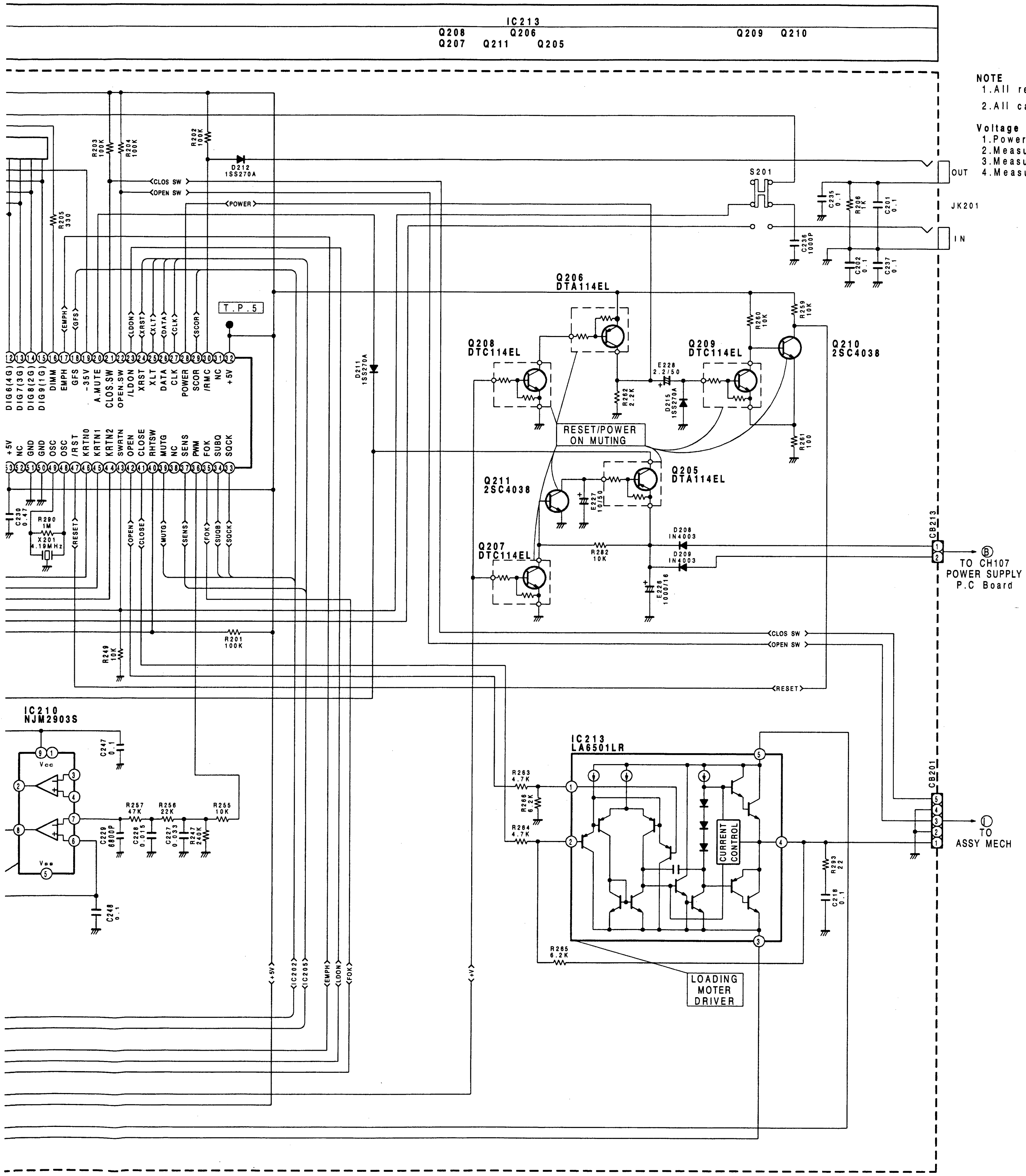
1	
2	1
3	
4	2
5	2
6	-
7	
8	
9	
10	
11	
12	-
13	-
14	
15	-
16	-
17	-
18	
19	
20	
21	-
22	
23	-
24	-
25	
26	2
27	2
28	4
29	0
30	4

IC204

1	1
2	0
3	
4	
5	-
6	0
7	
8	

IC209

1	2
2	2
3	4
4	4
5	
6	2
7	2
8	
9	
10	4
11	
12	
13	
14	4
15	4
16	4
17	4
18	
19	
20	
21	
22	4
23	2
24	2
25	3
26	1
27	
28	2



NOTE
1. All resistance values are in ohms. K=1,000 M=1,000,000
2. All capacitance values are in microfarads. P=$\frac{1}{1,000,000}$

Voltage Measuring Conditions
1. Power Supply Voltage :AC120/220/240V,50Hz
2. Measuring Meter :Digital Multimeter
3. Measuring Point Reference :Between Ground
4. Measuring Conditions :NO Signal Input
AT Play Mode Test CD
(Use the 2nd trak on the YEDS-18)

CAUTION:
The ⚠ mark, the symbol numbers in the schematic diagram designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

IC201

1	-29.3V	33	5V
2	-22.6V	34	1.4V
3	-27V	35	4.9V
4	-27V	36	0V
5	-22.6V	37	4.8V
6	-32.8V	38	—
7	-32.8V	39	0V
8	-32.8V	40	0V
9	-32.8V	41	0V
10	-32.8V	42	0V
11	-32.8V	43	2.2V
12	-32.8V	44	-19V
13	-32.8V	45	-19.1V
14	-32.8V	46	-18.7V
15	-32.8V	47	0V
16	0V	48	2.3V
17	-7.6V	49	2.3V
18	4.8V	50	0V
19	-35.8V	51	0V
20	-7.4V	52	—
21	0V	53	5V
22	5V	54	0V
23	0.4V	55	0V
24	5V	56	0V
25	5V	57	-22.2V
26	1.4V	58	-24.2V
27	1.4V	59	-23.8V
28	4.9V	60	-17.1V
29	0V	61	-10.1V
30	4.8V	62	-15.6V
31	—	63	-22.5V
32	5V	64	-29.8V

IC203

1	0V
2	1.1V
3	0V
4	2.5V
5	2.8V
6	-4.8V
7	0V
8	0V
9	0V
10	0V
11	0V
12	-0.6V
13	-0.4V
14	0V
15	-2.2V
16	-1.9V
17	-4.9V
18	0V
19	0V
20	0V
21	-4.8V
22	0V
23	-1.7V
24	-1.2V
25	0V
26	2.4V
27	2.4V
28	4.9V
29	0.2V
30	4.9V

IC202

1	-4.9V	25	-4.9V
2	-4.9V	26	0V
3	0V	27	—
4	0V	28	5V
5	0V	29	0V
6	0V	30	5V
7	0V	31	5V
8	0V	32	0V
9	0V	33	2.4V
10	0V	34	2.5V
11	1V	35	2.3V
12	0V	36	2.3V
13	0.3V	37	3.5V
14	0V	38	2.5V
15	0V	39	4.9V
16	4.9V	40	2.5V
17	0V	41	4.8V
18	-3.2V	42	2.5V
19	0V	43	4.9V
20	1V	44	0V
21	0V	45	1.1V
22	-4.9V	46	2.4V
23	-4V	47	0V
24	4.8V	48	0V

IC206

1	2.5V
2	2.5V
3	2.4V
4	2.4V
5	2.4V
6	2.4V
7	2.4V
8	2.4V
9	1.9V
10	1.9V
11	1.9V
12	0V
13	1.9V
14	1.9V
15	1.9V
16	1.9V
17	2V
18	2.6V
19	3V
20	2.6V
21	4.3V
22	2V
23	2.8V
24	4.9V

IC205

1	0V	41	2.4V
2	-4.8V	42	2.4V
3	2.5V	43	2.4V
4	2.7V	44	2.5V
5	2.4V	45	2.5V
6	2.6V	46	2.8V
7	4.9V	47	2V
8	2.4V	48	2V
9	2.4V	49	4.3V
10	0V	50	2.6V
11	1.5V	51	—
12	0V	52	0V
13	4.9V	53	2.3V
14	5V	54	—
15	1.4V	55	0V
16	5V	56	4.9V
17	0V	57	4.9V
18	4.8V	58	0V
19	0V	59	0V
20	—	60	—
21	—	61	—
22	—	62	—
23	1.4V	63	—
24	0V	64	—
25	5V	65	—
26	4.9V	66	—
27	2.3V	67	—
28	4.9V	68	—
29	2V	69	—
30	1.9V	70	—
31	1.9V	71	—
32	1.9V	72	—
33	4.9V	73	4.9V
34	1.9V	74	—
35	1.9V	75	—
36	1.9V	76	2.3V
37	1.9V	77	—
38	2.4V	78	2.5V
39	2.4V	79	2.4V
40	2.4V	80	2.5V

IC204

1	11.2V
2	0.6V
3	0V
4	0V
5	-12V
6	0.6V
7	0V
8	0V

IC209

1	2.5V
2	2.3V
3	4.9V
4	4.9V
5	—
6	2.6V
7	2.6V
8	0V
9	2V
10	4.9V
11	—
12	—
13	—
14	4.7V
15	4.9V
16	4.9V
17	4.9V
18	—
19	—
20	—
21	0V
22	4.9V
23	2.1V
24	2.1V
25	3.7V
26	1.9V
27	—
28	2.5V

	IC211	IC212
1	-4.9V	-4.9V
2	0V	0V
3	4.9V	4.9V
4	0V	0V
5	1.8V	1.8V
6	3.6V	3.6V
7	1.8V	1.8V
8	-4.9V	-4.9V
9	0V	0V
10	0V	0V
11	0V	0V
12	0V	0V
13	0V	0V
14	-2.4V	-2.4V
15	2.4V	2.4V
16	4.9V	4.9V

	IC101	IC102	IC210
1	0V	0V	0V
2	0V	0V	0V
3	0V	0V	-8V
4	-5V	-5V	0V
5	0V	0V	—
6	0V	0V	—
7	0V	0V	—
8	5V	5V	12V

	IC213	IC218
1	0~4.9V	0~4.9V
2	-4.9~4.9V	-4.9~4.9V
3	-12.8V	-12.8V
4	-4.9~4.9V	-4.9~4.9V
5	12V	12V

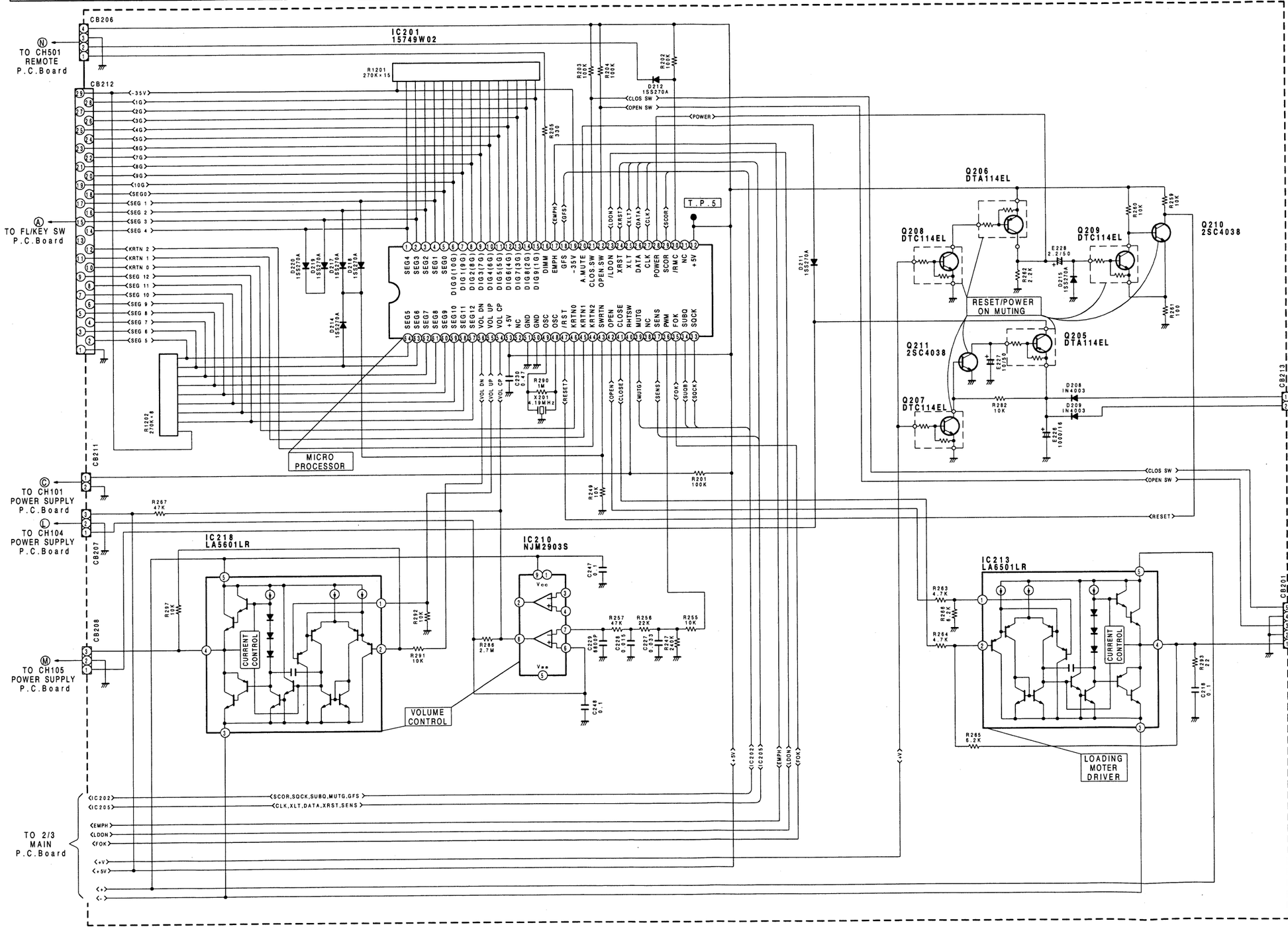
	IC105	IC214	IC215	IC216	IC217	IC501
1	15.7V	-4.9V	5.7V	5V	-5V	5V
2	0V	-12.8V	0V	0V	-12.8V	5V
3	11.9V	0V	12V	12V	0V	0V

	E	C	B
Q101	-30.2V	-43.8V	-30.7V
Q102	85.1V	130.5V	85.6V
Q103	0V	0V	-7.6V
Q104	0V	0V	-7.6V
Q105	0V	0V	-7.6V
Q106	0V	0V	-7.6V
Q107	0V	0V	-7.6V
Q108	0V	0V	-7.6V
Q204	0V	0V	2.8V
Q205	11.7V	-7.5V	0V
Q206	4.9V	4.9V	0V
Q207	0V	0V	6.3V
Q208	0V	0V	6.3V
Q209	0V	0V	0V
Q210	0V	0V	0V
Q211	0V	0V	0V
Q212	0.6V	11.2V	1V
Q213	0.6V	-12V	1V
Q220	4V	1.8V	2.8V
Q221	0V	0V	0.6V
Q222	0V	0V	0.6V
Q223	4.5V	0V	4.8V
Q224	0V	4.5V	0V
Q225	0V	0V	4.5V
Q226	0V	0V	0V

D-107U

Schematic Diagram (3/3) <JA model>

IC'S	IC201 IC218 IC210 IC213
TRANSISTORS (Q)	Q208 Q207 Q206 Q211 Q205 Q209 Q210



NOTE

1. All resistance values are in ohms. K=1,000 M
2. All capacitance values are in microfarads. P=$\frac{1}{1}$

Voltage Measuring Conditions

1. Power Supply Voltage :AC100V,50/60Hz
2. Measuring Meter :Digital Multimeter
3. Measuring Point Reference :Between Ground
4. Measuring Conditions :NO Signal Input
   AT Play Mode Test CD
   (Use the 2nd trak on

IC201

1	-29.3V	33	5V
2	-22.6V	34	1.4V
3	-27V	35	4.9V
4	-27V	36	0V
5	-22.6V	37	4.8V
6	-32.8V	38	—
7	-32.8V	39	0V
8	-32.8V	40	0V
9	-32.8V	41	0V
10	-32.8V	42	0V
11	-32.8V	43	2.2V
12	-32.8V	44	-19V
13	-32.8V	45	-19.1V
14	-32.8V	46	-18.7V
15	-32.8V	47	0V
16	0V	48	2.3V
17	-7.6V	49	2.3V
18	4.8V	50	0V
19	-35.8V	51	0V
20	-7.4V	52	—
21	0V	53	5V
22	5V	54	0V
23	0.4V	55	0V
24	5V	56	0V
25	5V	57	-22.2V
26	1.4V	58	-24.2V
27	1.4V	59	-23.6V
28	4.9V	60	-17.1V
29	0V	61	-10.1V
30	4.8V	62	-15.6V
31	—	63	-22.5V
32	5V	64	-29.8V

IC203

1	0V
2	1.1V
3	0V
4	2.5V
5	2.8V
6	-4.8V
7	0V
8	0V
9	0V
10	0V
11	0V
12	-0.6V
13	-0.4V
14	0V
15	-2.2V
16	-1.9V
17	-4.9V
18	0V
19	0V
20	0V
21	-4.8V
22	0V
23	-1.7V
24	-1.2V
25	0V
26	2.4V
27	2.4V
28	4.9V
29	0.2V
30	4.9V

IC205

1	0V	41	2.4V
2	-4.8V	42	2.4V
3	2.5V	43	2.4V
4	2.7V	44	2.5V
5	2.4V	45	2.5V
6	2.6V	46	2.8V
7	4.9V	47	2V
8	2.4V	48	2V
9	2.4V	49	4.3V
10	0V	50	2.6V
11	1.5V	51	—
12	0V	52	0V
13	4.9V	53	2.3V
14	5V	54	—
15	1.4V	55	0V
16	5V	56	4.9V
17	0V	57	4.9V
18	4.8V	58	0V
19	0V	59	0V
20	—	60	—
21	—	61	—
22	—	62	—
23	1.4V	63	—
24	0V	64	—
25	5V	65	—
26	4.9V	66	—
27	2.3V	67	—
28	4.9V	68	—
29	2V	69	—
30	1.9V	70	—
31	1.9V	71	—
32	1.9V	72	—
33	4.9V	73	4.9V
34	1.9V	74	—
35	1.9V	75	—
36	1.9V	76	2.3V
37	1.9V	77	—
38	2.4V	78	2.5V
39	2.4V	79	2.4V
40	2.4V	80	2.5V

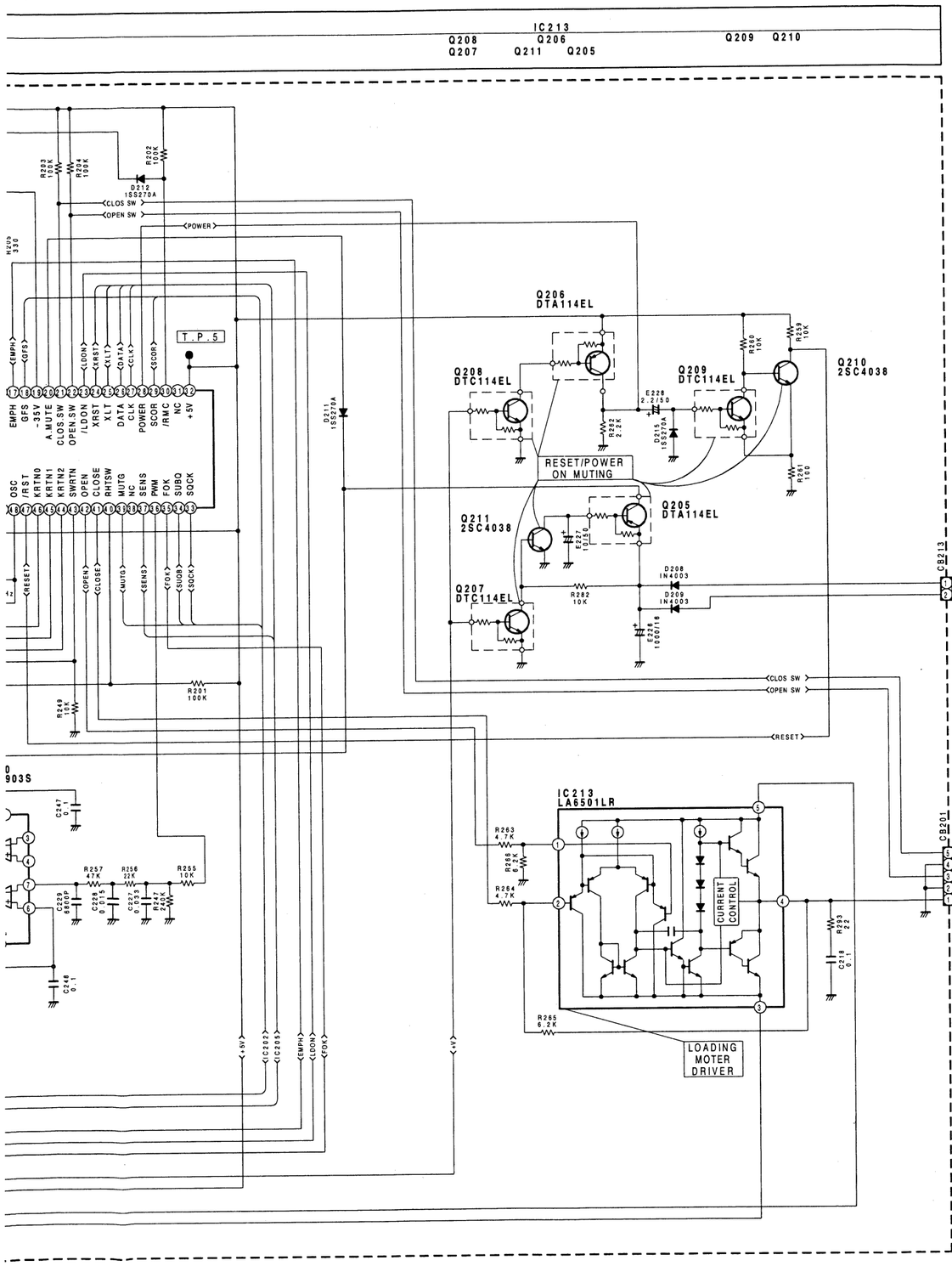
IC204

1	11.2V
2	0.6V
3	0V
4	0V
5	-12V
6	0.6V
7	0V
8	0V

IC209

1	2.5V
2	2.3V
3	4.9V
4	4.9V
5	—
6	2.6V
7	2.6V
8	0V
9	2V
10	4.9V
11	—
12	—
13	—
14	4.7V
15	4.9V
16	4.9V
17	4.9V
18	—
19	—
20	—
21	0V
22	4.9V
23	2.1V
24	2.1V
25	3.7V
26	1.9V
27	—
28	2.5V

	IC105	IC214	IC215	IC216	IC
1	15.7V	-4.1V	5.7V	5V	-
2	0V	-12.3V	0V	0V	-1
3	11.9V	0V	12V	12V	



NOTE

1. All resistance values are in ohms. K=1,000 M=1,000,000
2. All capacitance values are in microfarads. $P=\frac{1}{1,000,000}$

Voltage Measuring Conditions

1. Power Supply Voltage	: AC100V, 50/60Hz
2. Measuring Meter	: Digital Multimeter
3. Measuring Point Reference	: Between Ground
4. Measuring Conditions	: NO Signal Input AT Play Mode Test CD (Use the 2nd trak on the YEDS-18)

CAUTION:
The ⚠ mark, the symbol numbers in the schematic diagram designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

IC201

1	-29.3V	33	5V
2	-22.6V	34	1.4V
3	-27V	35	4.9V
4	-27V	36	0V
5	-22.6V	37	4.8V
6	-32.8V	38	—
7	-32.8V	39	0V
8	-32.8V	40	0V
9	-32.8V	41	0V
10	-32.8V	42	0V
11	-32.8V	43	2.2V
12	-32.8V	44	-19V
13	-32.8V	45	-19.1V
14	-32.8V	46	-18.7V
15	-32.8V	47	0V
16	0V	48	2.3V
17	-7.6V	49	2.3V
18	4.8V	50	0V
19	-35.8V	51	0V
20	-7.4V	52	—
21	0V	53	5V
22	5V	54	0V
23	0.4V	55	0V
24	5V	56	0V
25	5V	57	-22.2V
26	1.4V	58	-24.2V
27	1.4V	59	-23.8V
28	4.9V	60	-17.1V
29	0V	61	-10.1V
30	4.8V	62	-15.6V
31	—	63	-22.5V
32	5V	64	-29.8V

IC203

1	0V
2	1.1V
3	0V
4	2.5V
5	2.8V
6	-4.8V
7	0V
8	0V
9	0V
10	0V
11	0V
12	-0.6V
13	-0.4V
14	0V
15	-2.2V
16	-1.9V
17	-4.9V
18	0V
19	0V
20	0V
21	-4.8V
22	0V
23	-1.7V
24	-1.2V
25	0V
26	2.4V
27	2.4V
28	4.9V
29	0.2V
30	4.9V

IC202

1	-4.9V	25	-4.9V
2	-4.9V	26	0V
3	0V	27	—
4	0V	28	5V
5	0V	29	0V
6	0V	30	5V
7	0V	31	5V
8	0V	32	0V
9	0V	33	2.4V
10	0V	34	2.5V
11	1V	35	2.3V
12	0V	36	2.3V
13	0.3V	37	3.5V
14	0V	38	2.5V
15	0V	39	4.9V
16	4.9V	40	2.5V
17	0V	41	4.8V
18	-3.2V	42	2.5V
19	0V	43	4.9V
20	1V	44	0V
21	0V	45	1.1V
22	-4.9V	46	2.4V
23	-4V	47	0V
24	4.8V	48	0V

IC206

1	2.5V
2	2.5V
3	2.4V
4	2.4V
5	2.4V
6	2.4V
7	2.4V
8	2.4V
9	1.9V
10	1.9V
11	1.9V
12	0V
13	1.9V
14	1.9V
15	1.9V
16	1.9V
17	2V
18	2.6V
19	3V
20	2.6V
21	4.3V
22	2V
23	2.8V
24	4.9V

IC205

1	0V	41	2.4V
2	-4.8V	42	2.4V
3	2.5V	43	2.4V
4	2.7V	44	2.5V
5	2.4V	45	2.5V
6	2.6V	46	2.8V
7	4.9V	47	2V
8	2.4V	48	2V
9	2.4V	49	4.3V
10	0V	50	2.6V
11	1.5V	51	—
12	0V	52	0V
13	4.9V	53	2.3V
14	5V	54	—
15	1.4V	55	0V
16	5V	56	4.9V
17	0V	57	4.9V
18	4.8V	58	0V
19	0V	59	0V
20	—	60	—
21	—	61	—
22	—	62	—
23	1.4V	63	—
24	0V	64	—
25	5V	65	—
26	4.9V	66	—
27	2.3V	67	—
28	4.9V	68	—
29	2V	69	—
30	1.9V	70	—
31	1.9V	71	—
32	1.9V	72	—
33	4.9V	73	4.9V
34	1.9V	74	—
35	1.9V	75	—
36	1.9V	76	2.3V
37	1.9V	77	—
38	2.4V	78	2.5V
39	2.4V	79	2.4V
40	2.4V	80	2.5V

IC204

1	11.2V
2	0.6V
3	0V
4	0V
5	-12V
6	0.6V
7	0V
8	0V

IC209

1	2.5V
2	2.3V
3	4.9V
4	4.9V
5	—
6	2.6V
7	2.6V
8	0V
9	2V
10	4.9V
11	—
12	—
13	—
14	4.7V
15	4.9V
16	4.9V
17	4.9V
18	—
19	—
20	—
21	0V
22	4.9V
23	2.1V
24	2.1V
25	3.7V
26	1.9V
27	—
28	2.5V

	IC211	IC212
1	-4.9V	-4.9V
2	0V	0V
3	4.9V	4.9V
4	0V	0V
5	1.8V	1.8V
6	3.6V	3.6V
7	1.8V	1.8V
8	-4.9V	-4.9V
9	0V	0V
10	0V	0V
11	0V	0V
12	0V	0V
13	0V	0V
14	-2.4V	-2.4V
15	2.4V	2.4V
16	4.9V	4.9V

	IC101	IC102	IC210
1	0V	0V	0V
2	0V	0V	0V
3	0V	0V	-8V
4	-5V	-5V	0V
5	0V	0V	—
6	0V	0V	—
7	0V	0V	—
8	5V	5V	12V

	IC213	IC218
1	0~4.9V	0~4.9V
2	-4.9~4.9V	-4.9~4.9V
3	-12.8V	-12.8V
4	-4.9~4.9V	-4.9~4.9V
5	12V	12V

	IC105	IC214	IC215	IC216	IC217	IC501
1	15.7V	-4.9V	5.7V	5V	-5V	5V
2	0V	-12.8V	0V	0V	-12.8V	5V
3	11.9V	0V	12V	12V	0V	0V

	E	C	B
Q101	-30.2V	-43.8V	-30.7V
Q102	85.1V	130.5V	85.6V
Q103	0V	0V	-7.6V
Q104	0V	0V	-7.6V
Q105	0V	0V	-7.6V
Q106	0V	0V	-7.6V
Q107	0V	0V	-7.6V
Q108	0V	0V	-7.6V
Q204	0V	0V	2.8V
Q205	11.7V	-7.5V	0V
Q206	4.9V	4.9V	0V
Q207	0V	0V	6.3V
Q208	0V	0V	6.3V
Q209	0V	0V	0V
Q210	0V	0V	0V
Q211	0V	0V	0V
Q212	0.6V	11.2V	1V
Q213	0.6V	-12V	1V
Q220	4V	1.8V	2.8V
Q221	0V	0V	0.6V
Q222	0V	0V	0.6V
Q223	4.5V	0V	4.8V
Q224	0V	4.5V	0V
Q225	0V	0V	4.5V
Q226	0V	0V	0V

D-107U

Parts Layout on P.C. Boards and Wiring Diagram (AD)

FL/KEY SW P.C. BOARD

MAIN P.C. BOARD

HEAD PHONE P.C. BOARD

FADE P.C. BOARD

PRE HEAT P.C. BOARD

REMOTE P.C. BOARD

IN/OUT SW P.C. BOARD

LIMIT SW P.C. BOARD

HEAD OPTICAL PICK-UP (HD2001)

SPINDLE MOTOR (M2002)

SLED MOTOR (M2003)

LOADING MOTOR (M2001)

BLU ..... Blue
GRN ..... Green
BLK ..... Black
GRY ..... Gray
WHT ..... White
RED ..... Red
BRN ..... Brown
ORG ..... Orange
YEL ..... Yellow
VIO ..... Violet
PNK ..... Pink
GRN/WHT ..... Green/White
GRY/WHT ..... Gray/White
GRY/YEL ..... Gray/Yellow
GRN/YEL ..... Green/Yellow
SHLD ..... Shield

POWER SUPPLY P.C.BOARD

PLUG AC CORD(P101)

OUTPUT TRANS (T103)

OUTPUT TRANS (T104)

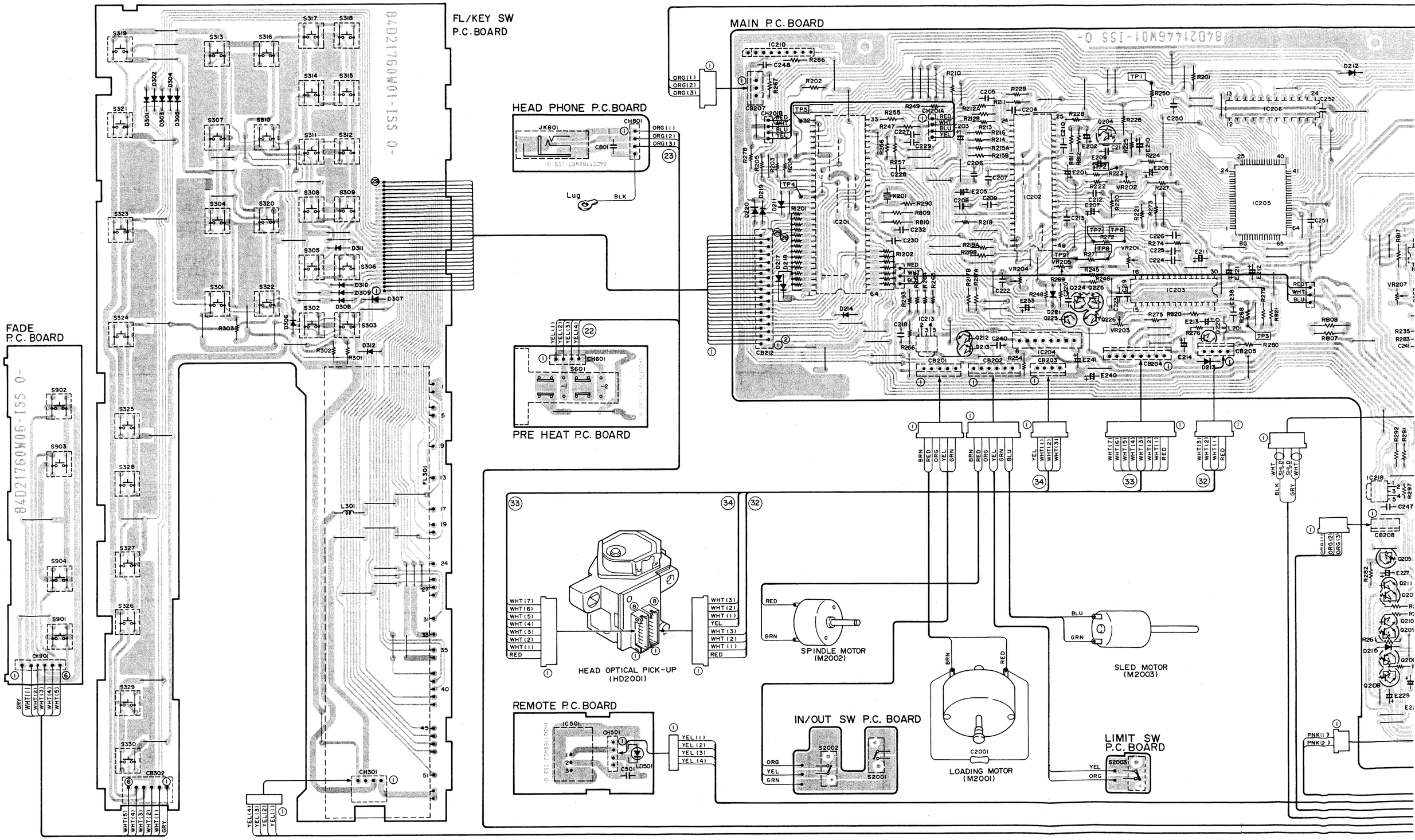
TUBE P.C.BOARD(2)

TUBE P.C. BOARD(1)

VOLUME CONTROL (VR101, M101)

POWER TRANS (T101)

Parts Layout on P.C. Boards and Wiring Diagram (JA)



BLU ..... Blue
GRN ..... Green
BLK ..... Black
GRY ..... Gray
WHT ..... White
RED ..... Red
BRN ..... Brown
ORG ..... Orange
YEL ..... Yellow
VIO ..... Violet
PNK ..... Pink
GRN/WHT ..... Green/White
GRY/WHT ..... Gray/White
GRY/YEL ..... Gray/Yellow
GRN/YEL ..... Green/Yellow
SHLD ..... Shield

POWER SUPPLY P.C.BOARD

PLUG AC CORD(PI01)

OUTPUT TRANS (TI03)

OUTPUT TRANS (TI04)

TUBE P.C.BOARD(2)

TUBE P.C. BOARD(1)

VOLUME CONTROL (VRI01, MI01)

POWER TRANS (TI01)

Electrical Parts List

Resistor:Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.
Capacitor: μF=microfarads, pF=picofarads

Abbreviations

CAP.=Capacitor	CER.=Ceramic
CP.=Chip	ELY.=Electrolytic
LED.=Light Emitting Diode	MIC.=Mica
MO.=Metal Oxide Film	MYL.=Mylar
PP.=Polypropylene	SOL.=Solid
TAN.=Tantalum	ZEN.=Zener

Symbol No.	Part No.	Description		
Main P.C. Board				
IC's				
	IC201	51T15749W02	15749W02	
	IC202	51T84722F02	CXA1082BS	
	IC203	51T84721F02	CXA1081S	
	IC204	51T25098W01	STA341M	
	IC205	51T84720F01	CXD1125QZ	
	or	51T84719F01	CXD1135QZ	
	IC206	51T84723F01	LC3516AS	
	IC209	51T15628W01	SM5813AP	
	IC210	51T62866F01	NJM2903S	
	IC211	51T15956W01	AD1860	
	IC212	51T15956W01	AD1860	
	IC213	51T90889F01	LA6501LR	
	IC214	51T80339F01	NJM7905FA	
	IC215	51T16168W02	μPC2405HF	
	IC216	51T80338F01	NJM7805FA	
	IC217	51T80339F01	NJM7905FA	
	IC218	51T90889F01	LA6501LR	
Transistors				
	Q204	48T82763F00	DTC114EL	
	Q205	48T82762F02	DTA114EL	
	Q206	48T82762F02	DTA114EL	
	Q207	48T82763F02	DTC114EL	
	Q208	48T82763F02	DTC114EL	
	Q209	48T82763F02	DTC114EL	
	Q210	48T82758F01	2SC4038	
	Q211	48T82758F01	2SC4038	
	Q212	48T69176F01	2SC3421	
	Q213	48T69177F01	2SA1358	
	Q220	48T82759F01	2SB1277	
	Q221	48T57305F04	2SD1302	
	or	48T90183F04	2SD1996	
	Q222	48T57305F04	2SD1302	
	or	48T90183F04	2SD1996	
	Q223	48T43526F02	2SA950	
	Q224	48T62963F04	DTC114	
	Q225	48T62963F04	DTC114	
	Q226	48T62963F11	DTC124TA	
Diodes				
	D201	48S40477U01	1N4003	
	D202	48S40477U01	1N4003	
	D203	48S40477U01	1N4003	
	D204	48S40477U01	1N4003	
	D206	48T84758F01	1SS270A	
	D207	48T84758F01	1SS270A	
	D208	48S40477U01	1N4003	
	D209	48S40477U01	1N4003	
	D210	48S40477U01	1N4003	
	D211	48T84758F01	1SS270A	
	D212	48T84758F01	1SS270A	
	D213	48T84758F01	1SS270A	
	D214	48T84758F01	1SS270A	
	D215	48T84758F01	1SS270A	
	D216	48S40477U01	1N4003	
	D217	48T84758F01	1SS270A	
	D218	48T84758F01	1SS270A	
	D219	48T84758F01	1SS270A	
	D220	48T84758F01	1SS270A	
	D221	48T84758F01	1SS270A	
	D222	48T84758F01	1SS270A	
	D223	48T84758F01	1SS270A	
Capacitors				
●	C201	08T57298F01	CER..	0.1μF
	E201	23T00180L08	ELY..	33μF/16V
●	C202	08T57298F01	CER..	0.1μF
	E202	23T00180L08	ELY..	33μF/16V
	E203	23T00180L25	ELY..	10μF/50V
	C204	08T57705F67	MYL..	0.01μF
	C205	08T57705F69	MYL..	0.015μF
	E205	23T00180L25	ELY..	10μF/50V
	C206	08T90316F27	TF..	0.068μF
	C207	08T90316F29	TF..	0.1μF
	E207	23T00180L20	ELY..	0.47μF/50V
	C208	08T57705F73	MYL..	0.033μF
	E208	23T00180L13	ELY..	47μF/25V
	C209	08T90316F29	TF..	0.1 μF
	E209	23T00180L24	ELY..	4.7μF/50V

Note : ● ; For West Germany model only(AD) Others ; Common
▲ : For Japanese model only(JA)

	Symbol No.	Part No.	Description		
	C210	08T57851F13	TF..	0.1μF	
	E210	23T00180L21	ELY..	1μF/50V	
	C211	08T57705F63	MYL..	4700pF	
	E211	23T00180L20	ELY..	0.47μF/50V	
	C212	08T57705F55	MYL..	1000pF	
	E212	23T00180L26	ELY..	22μF/50V	
	C213	08T57705F67	MYL..	0.01μF	
	E213	23T00180L28	ELY.	47μF/50V	
	C214	08S65480F13	CER..	10pF	
	E214	23T00180L26	ELY..	22μF/50V	
	C215	08S65480F13	CER..	10pF	
	E215	23T00180L08	ELY..	33μF/16V	
	C218	08T90316F29	TF..	0.1μF	
	C219	08T25620W01	CER..	0.47μF	
	C220	08T57705F59	MYL..	2200pF	
	E221	23T00180L26	ELY..	22μF/50V	
	C222	08T57705F63	MYL..	4700pF	
	C223	08T57705F73	MYL..	0.033μF	
	C224	08T57705F67	MYL..	0.01μF	
	C225	08T57705F67	MYL..	0.01μF	
	C226	08T57705F67	MYL..	0.01μF	
	E226	23T00181L21	ELY..	1000μF/16V	
	C227	08T57705F73	MYL..	0.033μF	
	E227	23T00180L25	ELY..	10μF/50V	
	C228	08T57705F69	MYL..	0.015μF	
	E228	23T00180L22	ELY..	2.2μF/50V	
	C229	08T57705F65	MYL..	6800pF	
	E229	23T00180L21	ELY..	1μF/50V	
	C230	08T25620W01	CER..	0.47μF	
	E231	23T00024L11	ELY..	2200μF/50V	
	C232	08T25620W01	CER..	0.47μF	
	E232	23T00024L11	ELY..	2200μF/50V	
	E233	23T00180L21	ELY..	1μF/50V	
●	C233	08T25620W01	CER..	0.47μF	
●	C234	21S40655F19	CER..	47pF	
●	C235	08T57298F01	CER..	0.1μF	
	E235	23T00207L01	ELY..	100μF/50V	
●	C236	08T40794F50	CER..	1000pF	
	E236	23T00207L01	ELY..	100μF/50V	
●	C237	08T57298F01	CER..	0.1μF	
	E237	23T00181L48	ELY..	100μF/50V	
	C238	08T57705F59	MYL..	2200pF	
	E238	23T00181L48	ELY..	100μF/50V	
	C240	08T90316F29	TF..	0.1μF	
	E240	23T00180L08	ELY..	33μF/16V	

	Symbol No.	Part No.	Description		
	C241	08T00151L73	PP..	9100P	
	E241	23T00180L08	ELY..	33μF/16V	
	C242	08T00151L73	PP..	9100p	
	C243	08T25620W01	CER..	0.47μF	
	C244	08T25620W01	CER..	0.47μF	
	C247	08T57298F01	CER..	0.1μF	
●	E247	23T00180L25	ELY..	10μF/50V	
	C248	08T57298F01	CER..	0.1μF	
●	E248	23T00180L25	ELY..	10μF/50V	
●	E249	23T00180L25	ELY..	10μF/50V	
	C250	08T25620W01	CER..	0.47μF	
●	E250	23T00180L25	ELY..	10μF/50V	
	C251	08T25620W01	CER..	0.47μF	
	C252	08T25620W01	CER..	0.47μF	
●	C253	08T25620W01	CER..	0.47μF	
●	E257	23T00180L25	ELY..	10μF/50V	
●	E258	23T00180L25	ELY..	10μF/50V	

Reristors

	R808	06T92264F19	MF..	56 ohm 2W	
	VR201	18T15355W15	Volume, RH064AC	22K ohm	
	VR202	18T15355W09	Volume, RH064AC	2.2K ohm	
	VR203	18T15335W15	Volume, RH064AC	22K ohm	
	VR204	18T15335W15	Volume.RH064AC	22K ohm	
	VR205	18T15335W15	Volume, RH064AC	22K ohm	
	VR207	18T15355W19	Volume, RH074AC	100K ohm	
	VR208	18T15355W19	Volume, RH074AC	100K ohm	
	R1201	06T74182F09	Res.. Block	270K ohm x15	
	R1202	06T74182F08	Res.. Block	270K ohm x8	

Coil

	L201	24T70381F21	COIL, IND.10μH		

Jack

●	JK201	09T84214F01	Head Phone Mini		
●	S201				

Note : ● ; For West Germany model only(AD) Others ; Common
▲ : For Japanese model only(JA)

	Symbol No.	Part No.	Description
Crystals			
	X201	91T15285W01	CER. LOCK 4.19MHz
	X202	91T84727F02	AT-51 16.9344MHz

Power Supply P.C. Board

	Symbol No.	Part No.	Description
IC's			
	IC101	51T81896F01	M5216P
	IC102	51T25576W01	NJM4580DD
	IC105	51T16168W01	μPC2412HF
Transistors			
	Q101	48T69177F01	2SA1358
	Q102	48T71447F01	2SC2752
	Q103	48T57305F04	2SD1302
	or	48T90183F04	2SD1996
▲	Q104	48T69176F01	2SC3421
●	Q104	48T57305F04	2SD1302
●	or	48T90183F04	2SD1994
	Q105	48T57305F04	2SD1302
	or	48T90183F04	2SD1996
	Q106	48T57305F02	2SD1302
	or	48T90183F04	2SD1996
	Q107	48T57305F04	2SD1302
	or	48T90183F04	2SD1996
	Q108	48T57305F04	2SD1302
	or	48T90183F04	2SD1996
Diodes			
	D101	48S40477U01	1N4003
	D102	48S40477U07	1N4007
	D103	48T84758F01	1SS270A
	D104	48T84758F01	1SS270A
	D105	48S40477U01	1N4003
	D106	48S40477U01	1N4003
	D107	48S40477U01	1N4003
	D108	48S40477U01	1N4003
	D110	48T84758F01	1SS270A
	D111	48T84758F01	1SS270A
	D112	48T84758F01	1SS270A
	D113	48T84758F01	1SS270A
	D114	48T84758F01	1SS270A
	D115	48T84758F01	1SS270A
●	D116	48T84758F01	1SS270A
●	D117	48T84758F01	1SS270A
●	D118	48T84758F01	1SS270A
●	D119	48T84758F01	1SS270A
▲	ZD101	48T52741F71	ZEN., HZ33-2L
●	ZD101	48T83128F71	ZEN., HZS33-2L
	ZD102	48T83128F65	ZEN., HZS27-2L
Capacitors			
●	C101	08T00196L01	XE., 0.01μF
	E101	23T00181L82	ELY., 100μF/ 250V
●	C102	08T00196L01	XE., 0.01μF
	E102	23T00181L32	ELY., 3300μF/25V
	C103	08T90316F29	TF., 0.1μF
	E103	23T00132L27	ELY., 100μF/50V
▲	C104	08T25620W01	CER., 0.47μF
●	C104	23T00181L39	ELY., 0.47μF/ 100V
	E104	23T00181L82	ELY., 100μF/ 250V
●	C107	08T00125L02	PLY., 4700pF
	E107	23T00181L81	ELY., 33μF/ 250V
▲	C108	08T25620W01	CER., 0.47μF
●	C108	23T00181L39	ELY., 0.47μF/ 100V
	E108	23T00181L81	ELY., 33μF/ 250V
▲	C109	08T25620W01	CER., 0.47μF
●	C109	23T00181L39	ELY., 0.47μF/ 100V
	E109	23T00180L23	ELY., 3.3μF/50V
●	C110	08T00151L13	PP., 1000pF
●	C111	08T00151L13	PP., 1000pF
●	C112	08T00151L12	PP., 820pF
●	C113	08T00151L12	PP., 820pF
Resistors			
▲	R121	06T92264F18	MF., 51 ohm 2W
	R123	06T00147L53	FC., 330 ohm 1/2W
	R124	06T00147L53	FC., 330 ohm 1/2W
	VR101	18T10803W02	Volume, RK16313MA
	M101	18T10803W02	Volume, RK16313MA
Relay			
▲	RL101	80T92812F02	MR62-5SR

Note : ● ; For West Germany model only(AD) Others ; Common
▲ : For Japanese model only(JA)

Symbol No.	Part No.	Description		
Coil				
● L101	24T82315F01	Filter, Line FKOB160MH02		
Switch				
S101	40T15820W01	PUSH POWER		
Jacks				
JK101	09T15974W01	2P, T6302-D105U (OUT-VARIABLE)		
JK102	09T15974W01	2P, T6302-D105U (OUT-FIXED)		
FL/Key SW P.C. Board				
Diodes				
D301	48T84758F01	1SS270A		
D302	48T84758F01	1SS270A		
D303	48T84758F01	1SS270A		
D304	48T84758F01	1SS270A		
D305	48T84758F01	1SS270A		
D306	48T84758F01	1SS270A		
D307	48T84758F01	1SS270A		
D308	48T84758F01	1SS270A		
D309	48T84758F01	1SS270A		
D310	48T84758F01	1SS270A		
D311	48T84758F01	1SS270A		
D312	48T84758F01	1SS270A		
Switchs				
S301	40T83324F11	TACT SKHHAP(Repeat)		
S302	40T83324F11	TACT SKHHAP(6)		
S303	40T83324F11	TACT SKHHAP(0)		
S304	40T83324F11	TACT SKHHAP(A-Pause)		
S305	40T83324F11	TACT SKHHAP(7)		
S306	40T83324F11	TACT SKHHAP(1)		
S307	40T83324F11	TACT SKHHAP(A-Scan)		
S308	40T83324F11	TACT SKHHAP(8)		
S309	40T83324F11	TACT SKHHAP(2)		
S310	40T83324F11	TACT SKHHAP(M-Check)		
S311	40T83324F11	TACT SKHHAP(9)		
S312	40T83324F11	TACT SKHHAP(3)		
S313	40T83324F11	TACT SKHHAP(Random)		
S314	40T83324F11	TACT SKHHAP(10)		
S315	40T83324F11	TACT SKHHAP(4)		

Symbol No.	Part No.	Description		
S316	40T83324F11	TACT SKHHAP(Edit)		
S317	40T83324F11	TACT SKHHAP(+10)		
S318	40T83324F11	TACT SKHHAP(5)		
S319	40T83324F11	TACT SKHHAP(STOP)		
S320	40T83324F11	TACT SKHHAP(Clear)		
S321	40T83324F11	TACT SKHHAP(PAUSE)		
S322	40T83324F11	TACT SKHHAP(Program)		
S323	40T83324F11	TACT SKHHAP(PLAY)		
S324	40T83324F11	TACT SKHHAP(Open/Close)		
S325	40T83324F11	TACT SKHHAP(SKIP-up)		
S326	40T83324F11	TACT SKHHAP(BACKWARD)		
S327	40T83324F11	TACT SKHHAP(FORWARD)		
S328	40T83324F11	TACT SKHHAP(SKIP-down)		
S329	40T83324F11	TACT SKHHAP (Display-adjust)		
S330	40T83324F11	TACT SKHHAP(T-display)		
Fade P.C. Board				
Switches				
S901	40T83324F11	TACT SKHHAP (Time fade out)		
S902	40T83324F11	TACT SKHHAP(VOLUME-down)		
S903	40T83324F11	TACT SKHHAP(VOLUME-Up)		
S904	40T83324F11	TACT SKHHAP(Fadeout)		
Coil				
▲ L301	24T50508F46	Ind 1mH		
● L302	24T35072W01	FBI, BLOIRNI-A92T5		
Remote P.C. Board				
IC's				
IC501	51T16094W01	GP 1U521		
or	51T16094W02	GP 1U521X		
Capacitor				
C501	08S65480F63	CER.. 0.1μF		
LED				
LD501	48T60947F05	SHL-34VR3F(RED)		

Note : ● ; For West Germany model only(AD) Others ; Common
▲ : For Japanese model only(JA)

Symbol No.	Part No.	Description		
Tube P.C. Board (1)				
Capacitor				
	E701	23T00181L69	ELY.. 10μH/ 100V	
Resistors				
	R705	06T92261F26	MF.. 2.4 ohm 2W	
	R706	06T92261F26	MF.. 2.4 ohm 2W	
Tube P.C. Board (2)				
Capacitors				
▲	C401	08T00151L25	PP.. 0.01μF	
●	C401	08T00019L01	Mtl.. 0.1μF	
▲	C402	08T00151L25	PP.. 0.01μF	
●	C402	08T00019L01	Mtl.. 0.1μF	
▲	C403	08T00151L13	PP.. 1000pF	
▲	C404	08T00151L13	PP.. 1000pF	
	C405	08T00019L01	Mtl.. 0.1μF	
	C406	08T00019L01	Mtl.. 0.1μF	
	C407	08T00019L12	MYL.. 3.3μF	
	C408	08T00019L12	MYL.. 3.3μF	
Miscellaneous				
▲	Q701	65T00091L03	Tube, 6CG7GE	
●	Q701	65T00091L01	Tube, 6CG7	
▲	Q702	65T00091L03	Tube, 6CG7GE	
●	Q702	65T00091L01	Tube, 6CG7	
▲	C107	08T00125L02	Poly.. 4700pF	
▲	C801	08T65480F63	CER.. 0.1μF	
●	C801	08T57298F01	CER.. 0.1μF	
●	C802	08T00151L12	PP.. 820pF	
●	C803	08T00151L12	PP.. 820pF	
	JK801	09T66672F04	Head Phone	
	S601	40T15685W01	SW, Push(PRE HEAT)	
▲	P101	28T81592F03	Plug, AC Cord	
●	P101	28T43812P04	Plug, Cord	
▲	T101	25T25627W01	Trans, Power	
●	T101	25T25627W02	Trans, Power	
	T103	25T25626W03	Trans, Output	
	T104	25T25626W04	Trans, Output	
●	F102	65T42077U01	Fuse, Semko 315mA	
	FL301	65T15386W01	FL Display FV335G	

Symbol No.	Part No.	Description		
C2001	08S40154T63	Cap., Cer. 0.022μF		
S2001	40T71025F01	SW., Detector(CLOSE)		
S2002	40T71025F01	SW., Detector(OPEN)		
S2003	40T71025F01	SW., Detector(Limit)		
M2001	01V11200W42	Assy., Motor Loading		
M2002	59T81431F01	Motor., Spindle		
M2003	01V81800F61	Assy., Motor SLED		
HD2001	88T81528F01	Head, Optical Pick Up		

Note : ● ; For West Germany model only(AD) Others ; Common
▲ : For Japanese model only(JA)

Cabinet Assembly Parts List

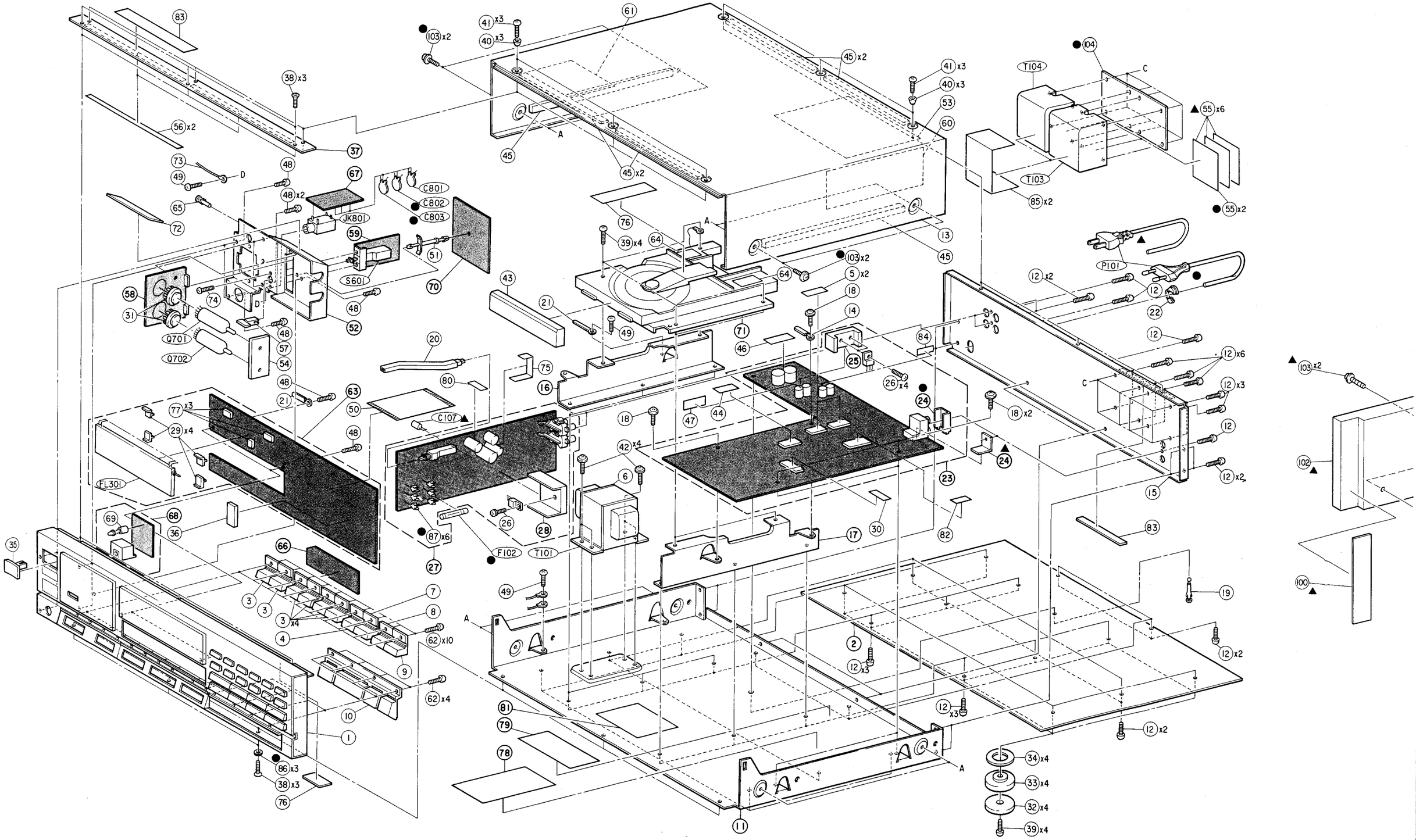
Note : The parts without part numbers are not supplied.

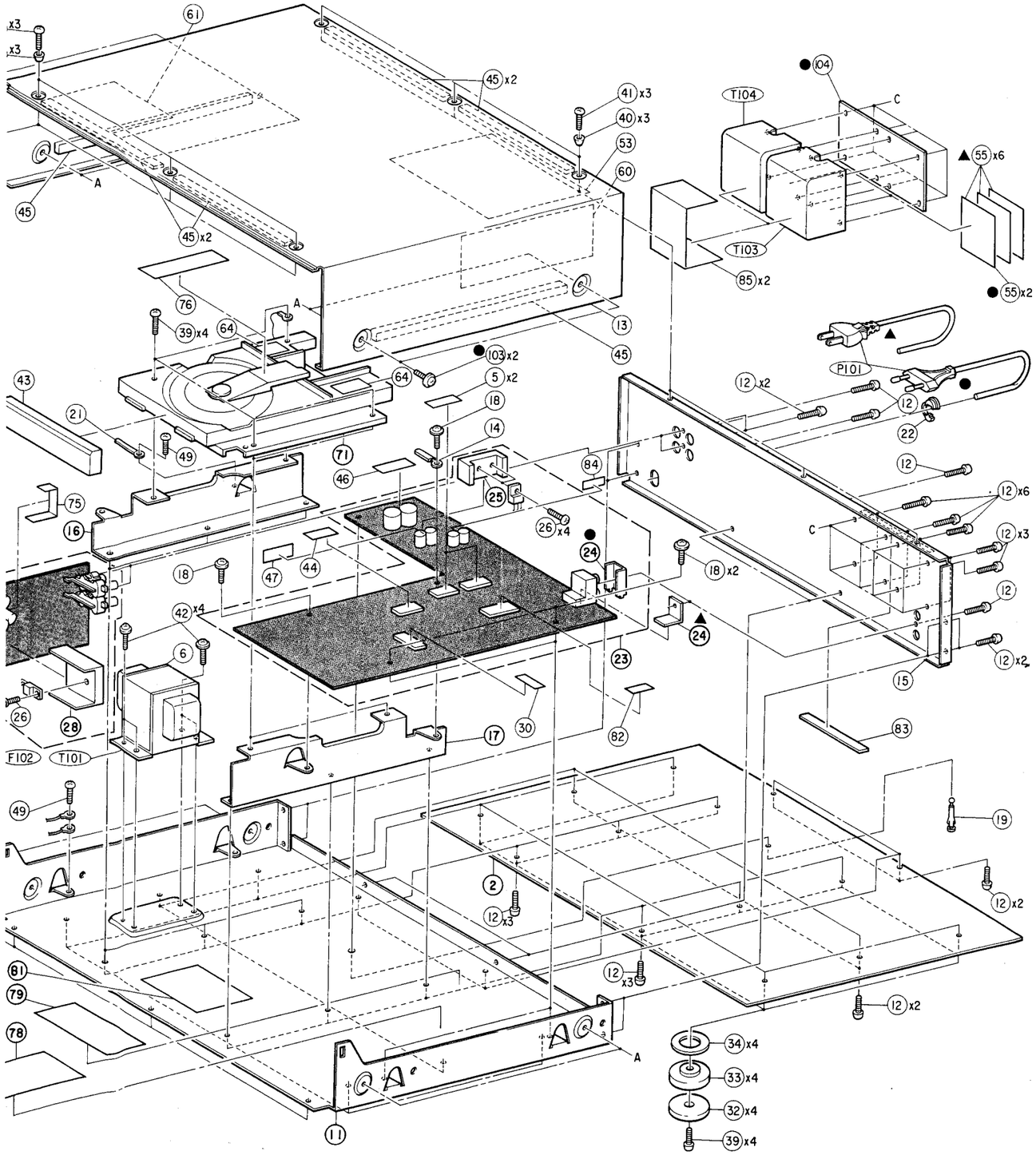
Symbol No.		IN-dex	Part No.	Description		
▲	1	5-C	01V00305S01	Assy., Front Panel		
●	1	5-C	01V26100W40	Assy., Front Pnael		
	3	4-B	36A11877W01	Konb, Display ADJ		
	4	4-B	36A11877W10	Konb, Push Backward		
	5	2-E	14S20875W35	Insulator, Cover		
	6	3-D	14S20478W20	Insulator, Cover		
	7	4-C	36A11877W11	Konb, Push Forward		
	8	4-C	36A11877W12	Konb, Skip Down		
	9	5-C	36A11877W13	Konb, Skip Up		
	10	5-C	36B11878W02	Konb, Function		
	12		03S82672F33	Scr., Bind(M3x8)		
	13	2-F	15C11879W01	Cover, Top		
	14	3-E	29A737272	Lug, Wrap Around		
▲	15	4-G	15D11880W05	Cover, Rear		
●	15	4-G	15D11880W06	Cover, Rear		
▲	18		03S71252F70	Scr., Cup(M3x10)		
●	18		03S71677F41	Scr., W/Washer(3x6)		
	19	4-H	43T92160F04	Spacer, PCB 18R		
	20	3-C	45B57186F01	Lever, Konb		
	21		29C41045P05	Lug, Wrap Around		
▲	22	2-G	43B41625J05	Stopper, Cord		
●	22	2-G	43B41625J02	Stopper, Cord		
	26		03S72235F20	Scr., Bind(M3x8)		
	29	3-B	07A83876F01	Support, FL		
	30	4-F	14S94461F85	Insulator, Cover		
	31	3-A	09T64527F02	Socket, Tube 9P		
	32	5-F	75A80719F01	Pad, Trannleg		
	33	5-F	75B80720F03	Trannleg		
	34	5-F	75A13129W02	Pad, Trannleg		
	35	4-A	36A67330F01	Konb, Power		
	36	4-B	75S72374F91	Cushion, Rubber		
	38		03S44205G50	Scr., Countersink (M3x6)		
	39		03S71677F30	Scr., Bind(M4x12)		
	40		13A13279W01	ESC, Scr(N)		
	41		03S52360F36	Scr., Bind(M4x8)		
	42	3-D	03S44205G92	Scr., Bind(M4x6)		
	43	2-D	64B11870W03	Tray, Panel		
	44	3-E	14S94461F86	Insulator, Cover		
	45		75S12196W27	Cushion, Rubber		
▲	46	3-E	14S20478W35	Insulator, Cover		
●	46	3-E	14S20478W53	Insulator, Cover		
	47	3-E	14S20875W39	Insulator, Cover		
	48		03S71677F06	Scr., Flange(M2.6x6)		
	49		03S44205G85	Scr., Bind(M3x8)		
	50	3-C	30T15818W01	Wire, Parallel 29P		

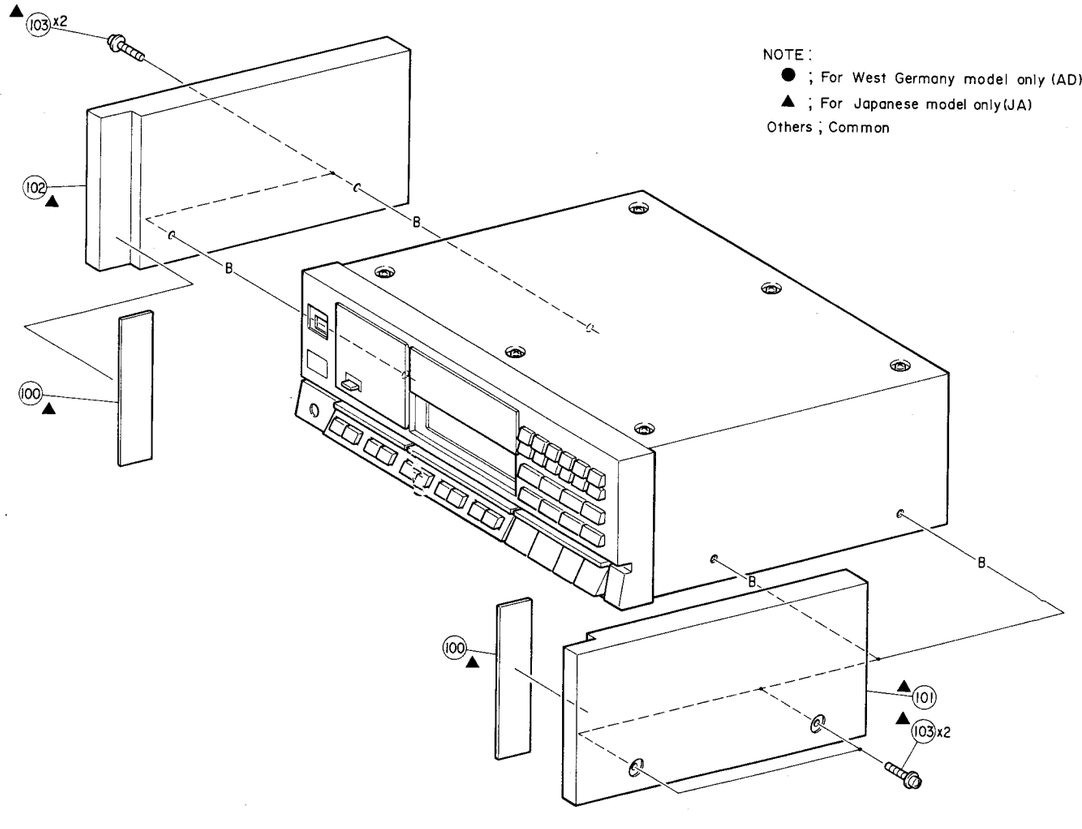
Symbol No.		IN-dex	Part No.	Description		
	51	2-C	43T16241W08	Support, PBC		
	53	1-F	14S20478W38	Insulator, Cover		
	54	3-B	75A67341F01	Cushion, Tube		
	55	2-H	14S20478W39	Insulator, Cover		
	56	1-B	14S96390F69	Insulator, Cover		
	57	3-B	36A67333F01	Konb, Push		
	60	1-F	14S96390F70	Insulator, Cover		
▲	61	1-D	14S20478W01	Insulator, Cover		
●	61	1-D	14S20478W38	Insulator, Cover		
	62		03S40012G18	Scr., TPG(M2.6x6)		
	64		75S12196W53	Cushion, Rubber		
	65	2-B	05B41635J02	Rivet, Push		
	69	4-A	43A41837U05	Spacer, SW		
	72	2-B	14S96390F58	Insulator, Cover		
	73	2-B	01T84733F11	Assy., Lug Wire		
	74	2-B	03S82671F81	Scr., Bind(M3x6)		
	75	3-D	14S20478W34	Insulator, Cover		
	76		75S12196W54	Cushion, Rubber		
	77	3-B	75S12196W21	Cushion, Rubber		
	80	3-C	14S20478W16	Insulator, Cover		
	82	4-F	14S94461F87	Insulator, Cover		
	83		14S20478W37	Insulator, Cover		
	84	3-F	14S20875W40	Insulator, Cover		
	85	2-G	14S20478W36	Insulator, Cover		
●	86	5-B	04S40072G31	Washer, Tooth Lock		
●	87	4-C	09T51410F01	Holder, Fuse		
▲	100		75A21814W01	Cushion, Wood Cab		
▲	101	5-K	16B21554W03	Cab., Wood "R"		
▲	102	3-H	16B21554W04	Cab., Wood "L"		
▲	103		03A92739F02	Scr., Wood Cab(M4x25)		
●	103		03S40036U01	Scr., W/Washer(M4x8)		
●	104	1-G	14A38009W01	Insulator, Cover		

NOTE : ● ; For West Germany model only(AD) Others ; Common
▲ ; For Japanese model only(JA)

Exploded View (Cabinet)



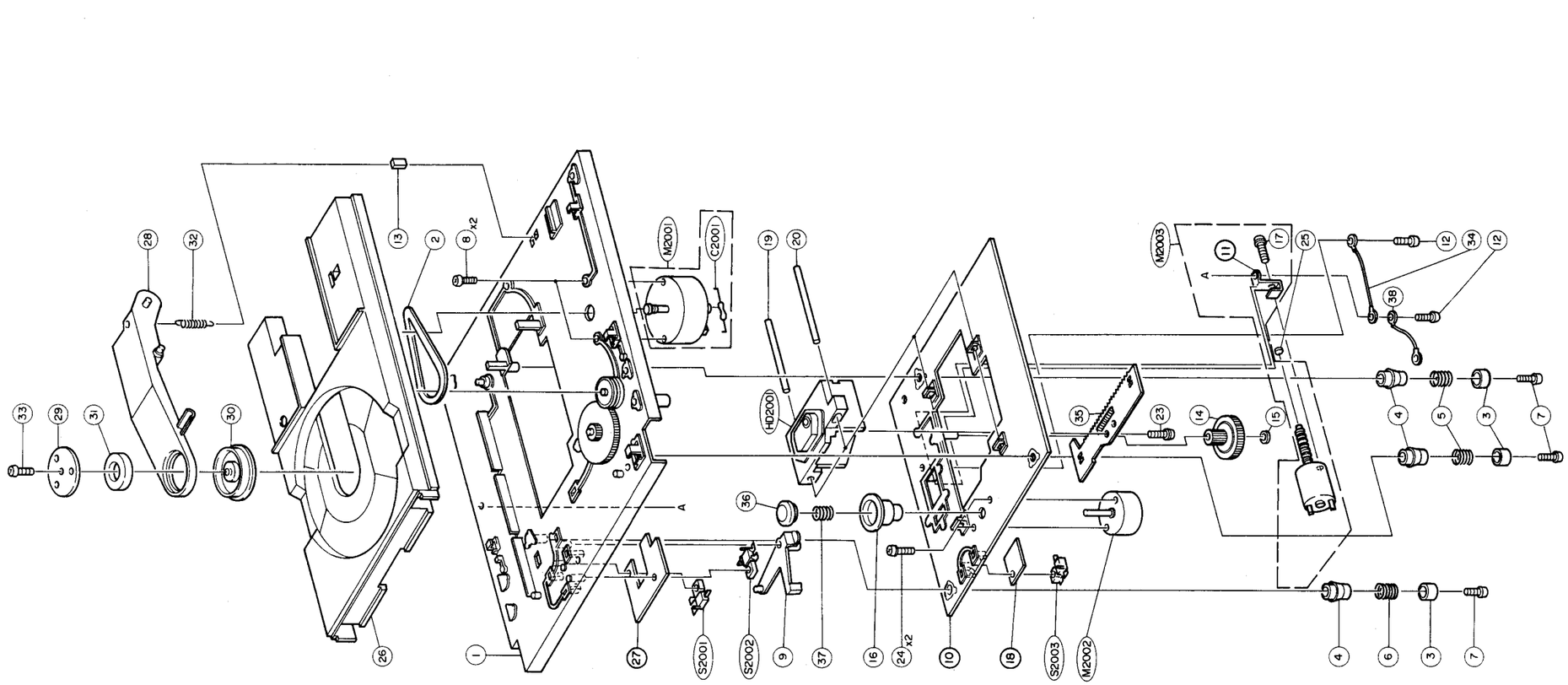




NOTE :
● ; For West Germany model only (AD)
▲ ; For Japanese model only (JA)
Others ; Common

D-107u D-107u

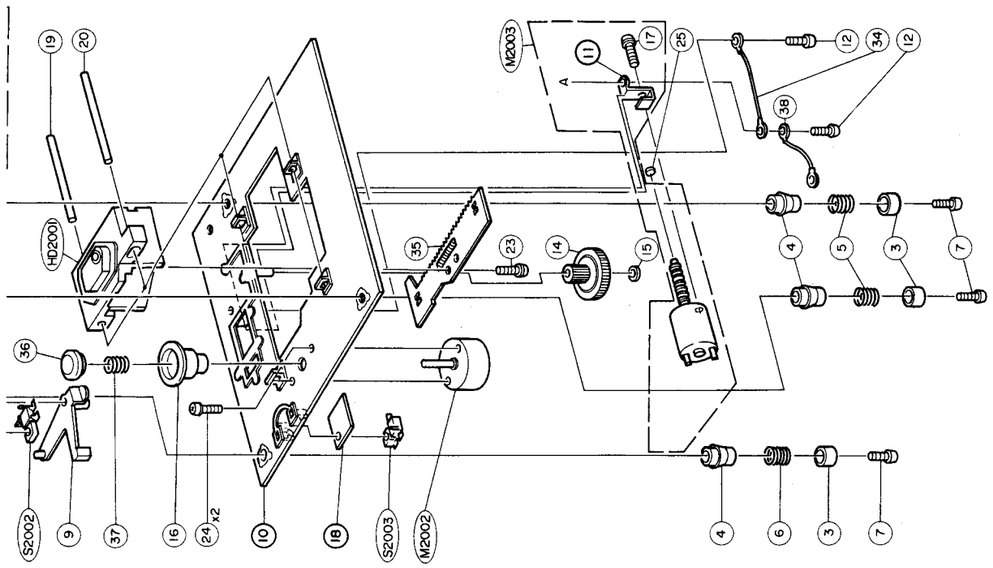
Exploded View (Mechanism)



Mechanism

Note : The parts wi

Symbol No.	IN-dex	Part No
1	4-C	01C82319
2	2-C	42A81427
3		43A81407
4		75A81411
5	3-G	41A81428
6	4-G	41A81428
7		03S40012
8	2-C	03D40014
9	4-D	45A81434
12	2-G	03S44205
13	2-C	75S12196
14	3-F	44A81401
15	3-F	04A41345
16	4-E	49B81414
17	2-F	03D40014
19	2-D	47A81426
20	2-D	47A81426
23	3-F	03S70494
24	4-E	03D40014
25	2-F	43A41182
26	4-C	01C10716
28	2-B	45C81418
29	3-A	07A81413
30	3-B	49A81403
31	3-A	59T81430
32	2-B	41B81429
33	3-A	03S70494
34	2-G	01T92483
35	3-E	01A82323
36	3-D	49B81417
37	4-D	41A81428
38	2-G	01T84733



Mechanism Assembly Parts List

Note : The parts without part numbers are not supplied.

Symbol No.	IN-dex	Part No.	Description		
1	4-C	01C82319F01	Assy., Chas. Main		
2	2-C	42A81427F02	Belt, Drive		
3		43A81407F01	Bush, Damper		
4		75A81411F01	Rubber, Damper		
5	3-G	41A81428F03	Spring, Compresion		
6	4-G	41A81428F05	Spring, Compresion		
7		03S40012G18	Scr., Tpg(M2.6X6)		
8	2-C	03D40014G19	Scr., W/Washer (M2.6x5)		
9	4-D	45A81434F01	Arm, SW		
12	2-G	03S44205G30	Scr., Pan(M2.6x4)		
13	2-C	75S12196W06	Cushion, Rubber		
14	3-F	44A81401F01	Gear, Worm Wheel		
15	3-F	04A41345F02	Washer, Lock(M1.7)		
16	4-E	49B81414F01	Disc, Table		
17	2-F	03D40014G61	Scr., W/Washer(M2x5)		
19	2-D	47A81426F01	Shaft, Head		
20	2-D	47A81426F02	Shaft, Head		
23	3-F	03S70494F01	Scr., Bind(M2x5)		
24	4-E	03D40014G07	Scr., W/Washer(M2x4)		
25	2-F	43A41182P02	Ball, Steel		
26	4-C	01C10716W01	Assy., Tray Disc		
28	2-B	45C81418F04	Arm, Clamp		
29	3-A	07A81413F01	BKt., Magnet		
30	3-B	49A81403F01	Wheel, Clamp		
31	3-A	59T81430F01	Magnet		
32	2-B	41B81429F02	Spring, Extension		
33	3-A	03S70494F08	Scr., Pan(M2x5)		
34	2-G	01T92483F01	Assy., Lug Wire 1P		
35	3-E	01A82323F01	Assy., Rack		
36	3-D	49B81417F01	Disc, Guide		
37	4-D	41A81428F01	Spring, Compresion		
38	2-G	01T84733F11	Assy., Lug Wire		

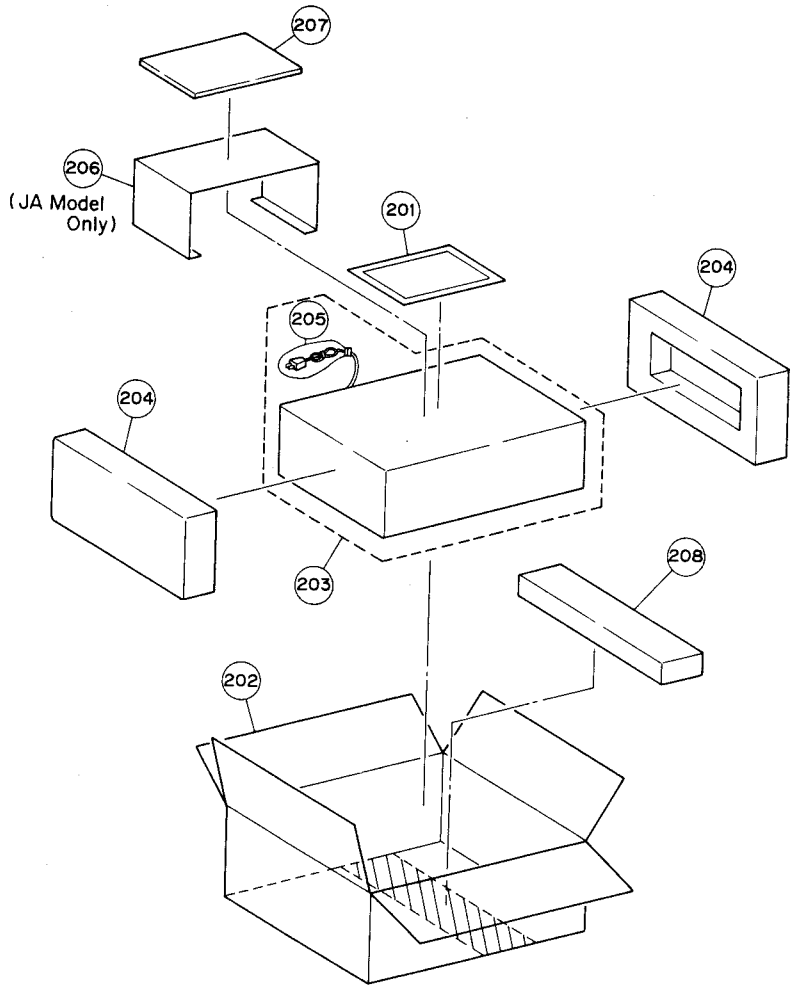
Symbol No.	IN-dex	Part No.	Description		

Packing Assembly Parts List

Symbol No.		Part No.	Description		
▲	201-1	68P69552F86	Owner's Manual		
●	201-1	68P96552F89	Owner's Manual		
▲	201-2	01T25754W01	Unit, Remocon		
●	201-2	01T25754W02	Unit, Remocon		
	201-3	60T58064F01	Battery, SUM-3		
	201-4	28T67347F04	Plug, Output		
●	201-5	01T82091F01	Assy., Mini. Plug Cord		
▲	202	56S10005W58	Carton, Packing		
●	202	56S10005W59	Carton, Packing		
	203	56B40442T08	Packing, Front Frame		
	204	56D11887W01	Tray, Pkg		
	205	56B40230G08	Sack, Poly		
▲	206	56A52079F12	Packing, Sheet		
▲	207	56A22487W01	Pad, Packing		
●	207	56A22487W02	Pad, Packing		
	208	56A22665W01	Pad, Packing		

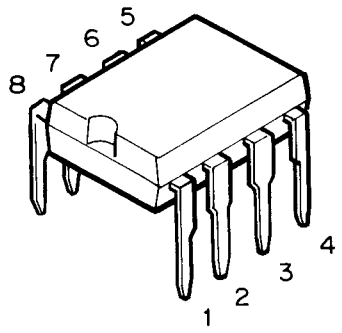
NOTE : ● ; For West Germany model only(AD) Others ; Common
▲ ; For Japanese model only(JA)

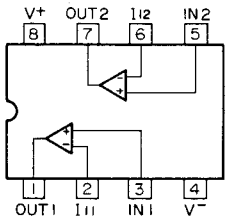
Packing Method View



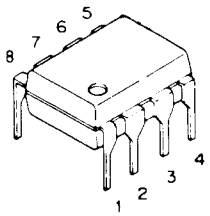
Semi-Conductor Lead Identifications

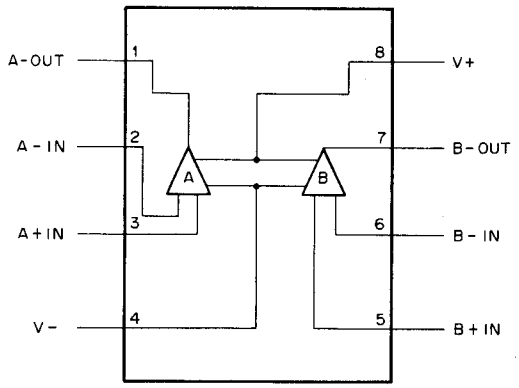
M5216P: IC101



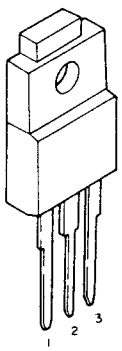


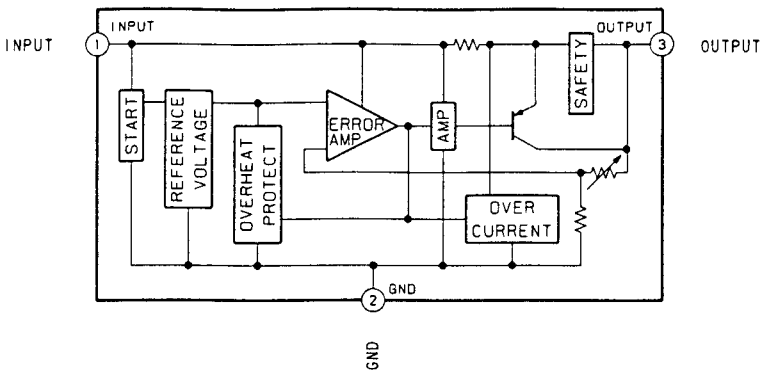
NJM4558DD: IC102



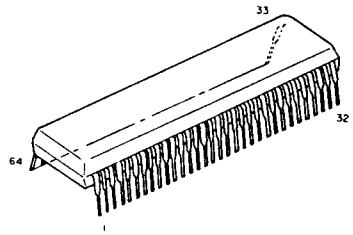


μPC2412HF: IC105
μPC2405HF: IC215



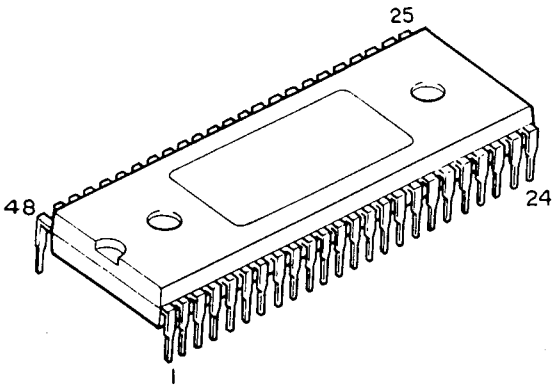


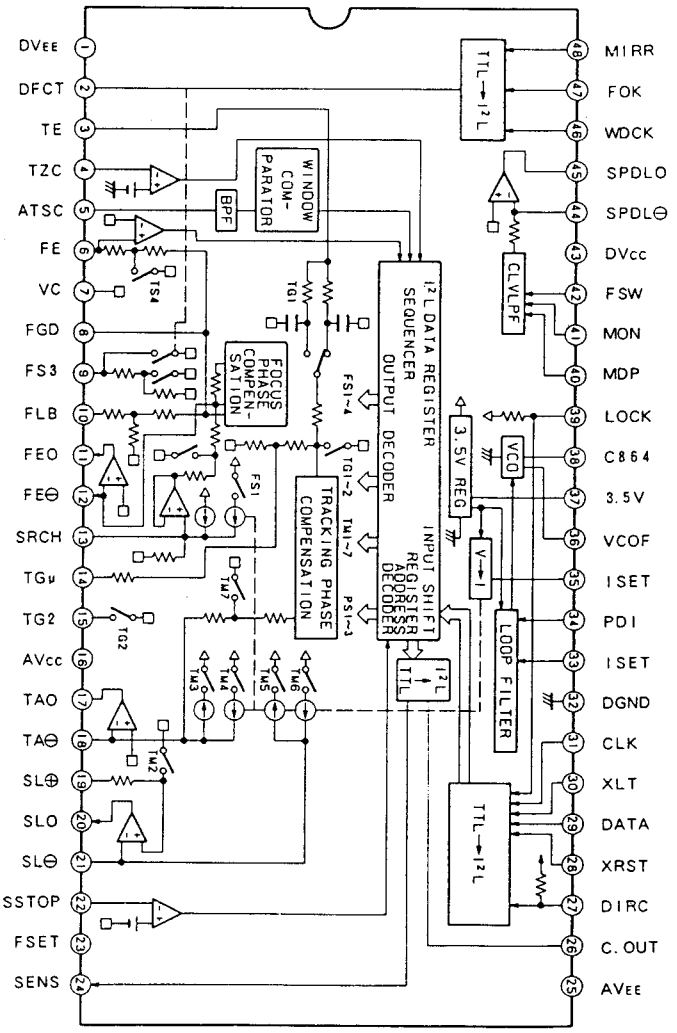
15749W02: IC201



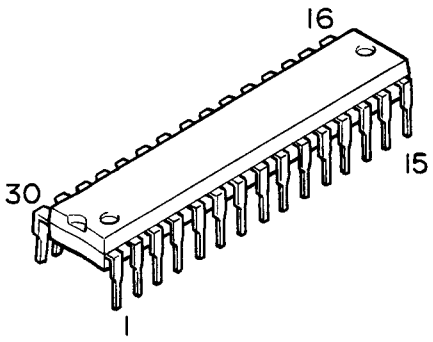
1	SEG4	17	EMPHA	33	SQ CK	49	OSC
2	SEG3	18	GFS	34	SUBQ	50	GND
3	SEG2	19	−35V	35	FOK	51	GND
4	SEG1	20	A.MUTE	36	PWM	52	NC
5	SEG0	21	CLOSE SW	37	SENS	53	+5V
6	DIG0(1G)	22	OPEN SW	38	NC	54	VOL CP
7	DIG1(2G)	23	LD ON	39	MUTE	55	VOL UP
8	DIG2(3G)	24	XRST	40	RHT SW	56	VOL DOWN
9	DIG3(4G)	25	XLT	41	CLOSE	57	SEG12
10	DIG4(5G)	26	DATA	42	OPEN	58	SEG11
11	DIG5(6G)	27	CLK	43	SWRTN	59	SEG10
12	DIG6(7G)	28	POWER	44	KRTN2	60	SEG9
13	DIG7(8G)	29	SCOR	45	KRTN1	61	SEG8
14	DIG8(9G)	30	RMC	46	KRTN0	62	SEG7
15	DIG9(10G)	31	NC	47	RESET	63	SEG6
16	DIMM	32	+5V	48	OSC	64	SEG5

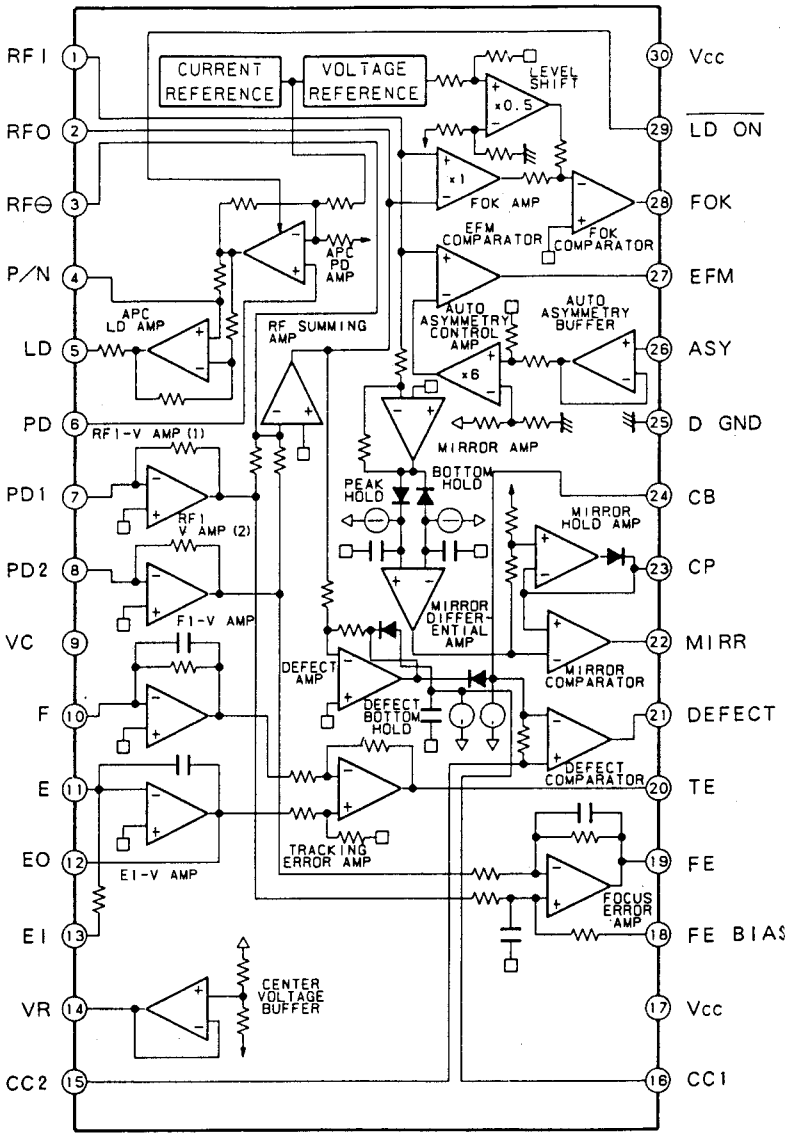
CXA1082BS: IC202



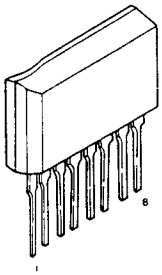


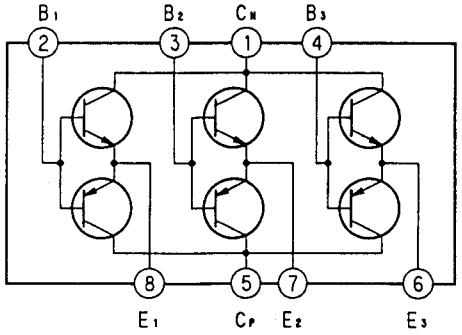
CXA1081S: IC203





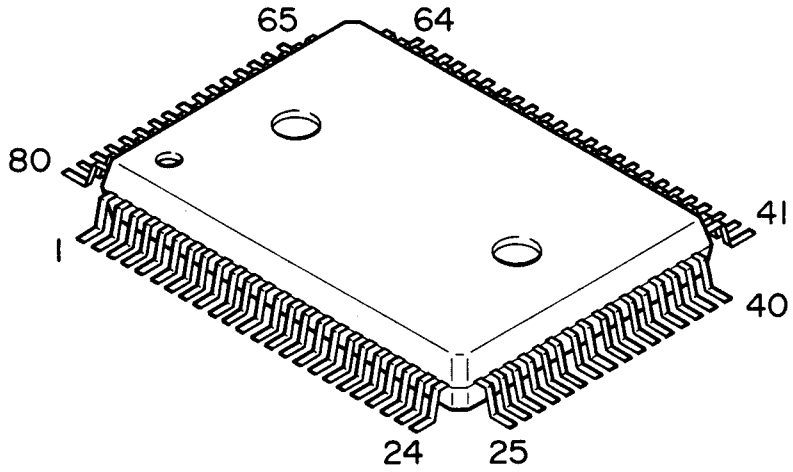
STA341M: IC204

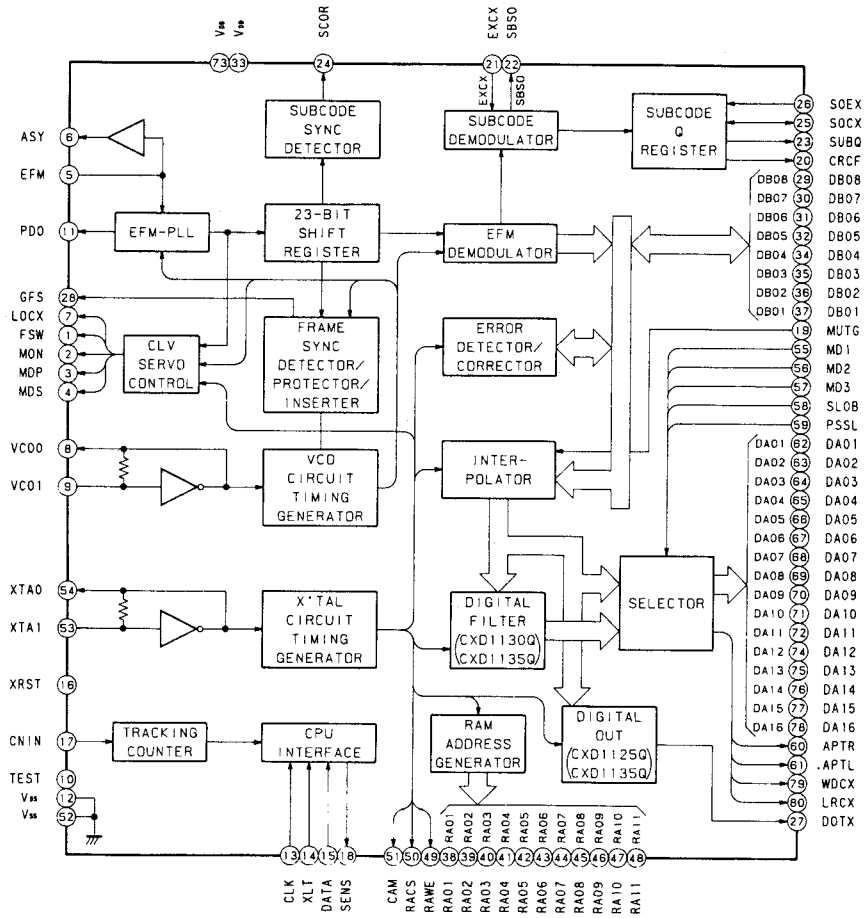




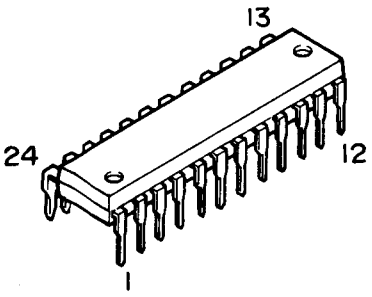
B. Base
C. Collector
E. Emitter

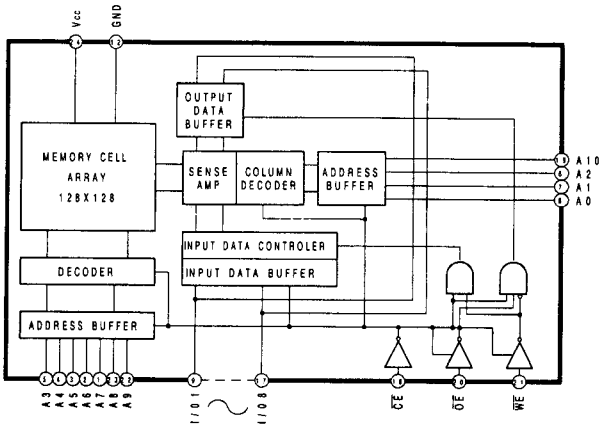
CDX1125QZ: IC205
or **CDX1135QZ**





LC3516AS: IC206





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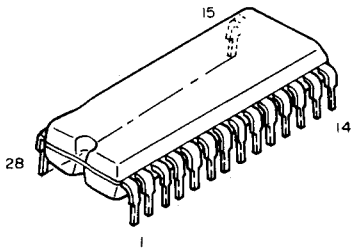

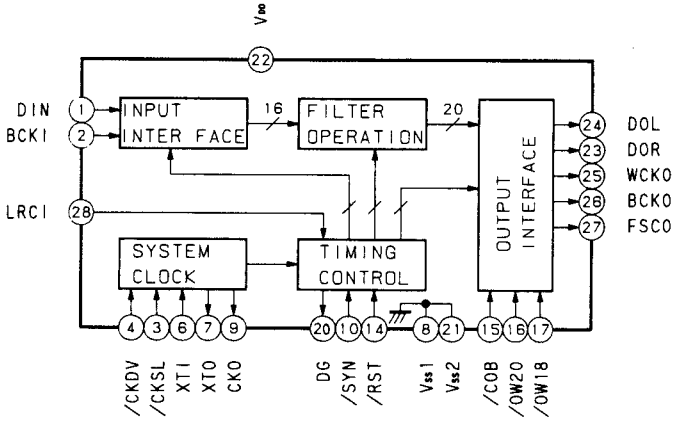

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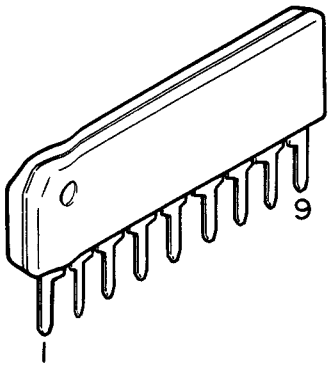
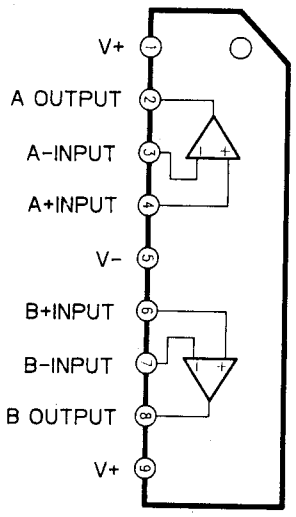
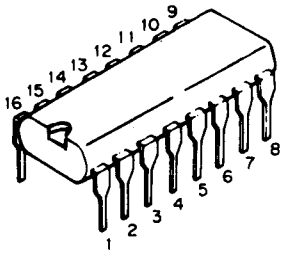
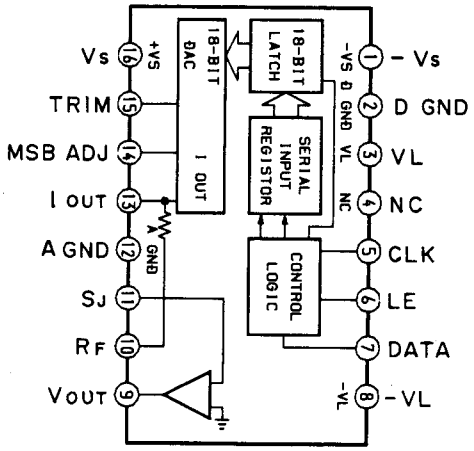




AD1860: IC211 or IC212





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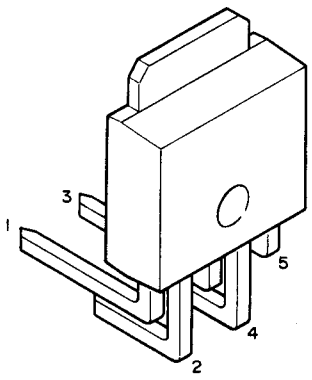

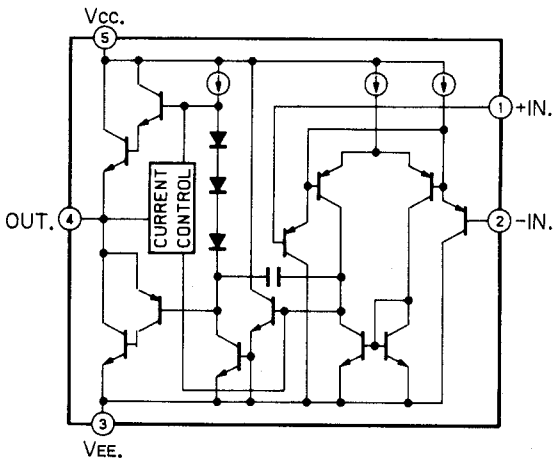

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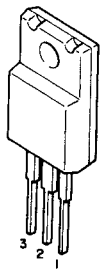

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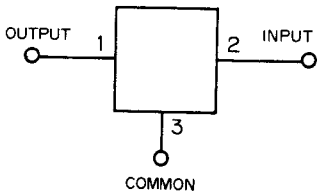

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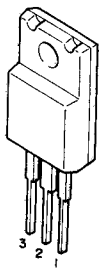

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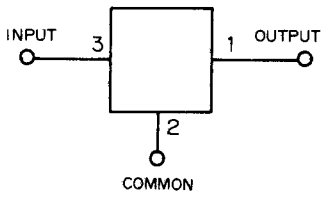
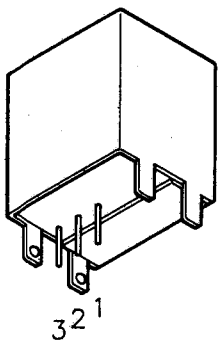
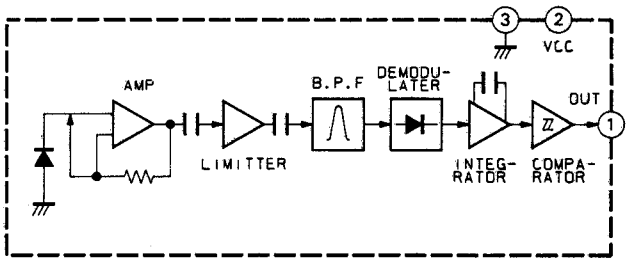


GP1U521: IC501
or **GP1U521X**



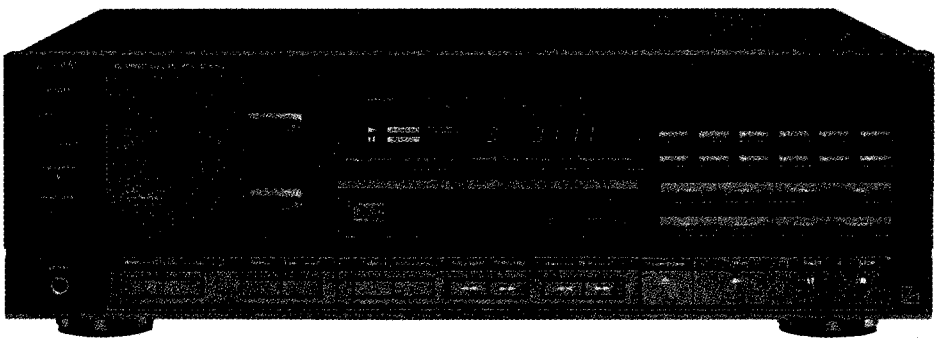


V11325

SERVICE MANUAL

Compact Disc Player

D-105U



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Note : ● : For Japanese model only (JA)
▲ : For General Foreign model only (EK)
Others : Common

◆ : For American model only (UZ)
■ : For West German model only (AD)
◇ : For Canadian model only (UQ)
□ : For England model only (AG)

Specifications

CD SECTION

Systems	Optical (Compact Disc System)
Quantizing Bit Number	16 Bit Linear System
Channels	2 Channels, Stereo
Pick-up	Semiconductor Laser Pick-up
Output Voltage	2.1V±1dB
Frequency Response	5~20kHz±1.6dB
T.H.D (1KHz)	0.12%
S/N Ratio	96dB
Dynamic Range	87dB
Separation (1KHz)	82dB
Head-phone Output Voltage (1kHz, 10dB/8ohm)	130mV±1dB
Power Supply	AC100V, 50/60Hz (JA Model Only) AC120/220/240V, 50Hz (EK/AD/AG Model Only) AC120V, 60Hz (UZ/UQ Model Only)
Power Consumption	25W
Semiconductors	25IC's, 26 Transistors, 40 Diodes, 2 Zener Diodes, 2 Vacume Tubes (AD/UZ/AG/UQ Model Only) 25IC's, 26 Transistors, 39 Diodes, 2 Zener Diodes, 2 Vacume Tubes (JA/EK Model Only)
Dimension (W×H×D)	438×147×342mm
Weight	8.5kg

COMPACT DISC

Track Pitch	1.6μm
Modulation Frequency	44.1MHz
Transfer Rate	4.3218MBit/sec
Dimension	120×1.2mm

Parts Locations and Disassembly Instructions

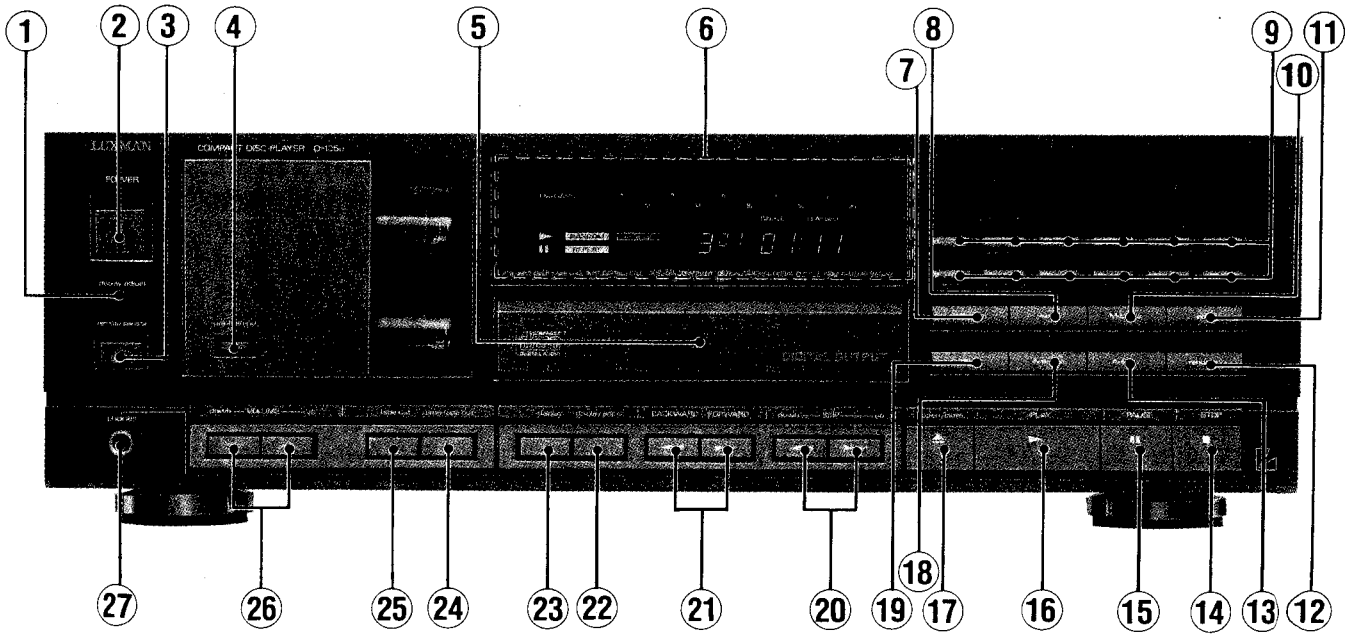


Figure 1 〈1図〉

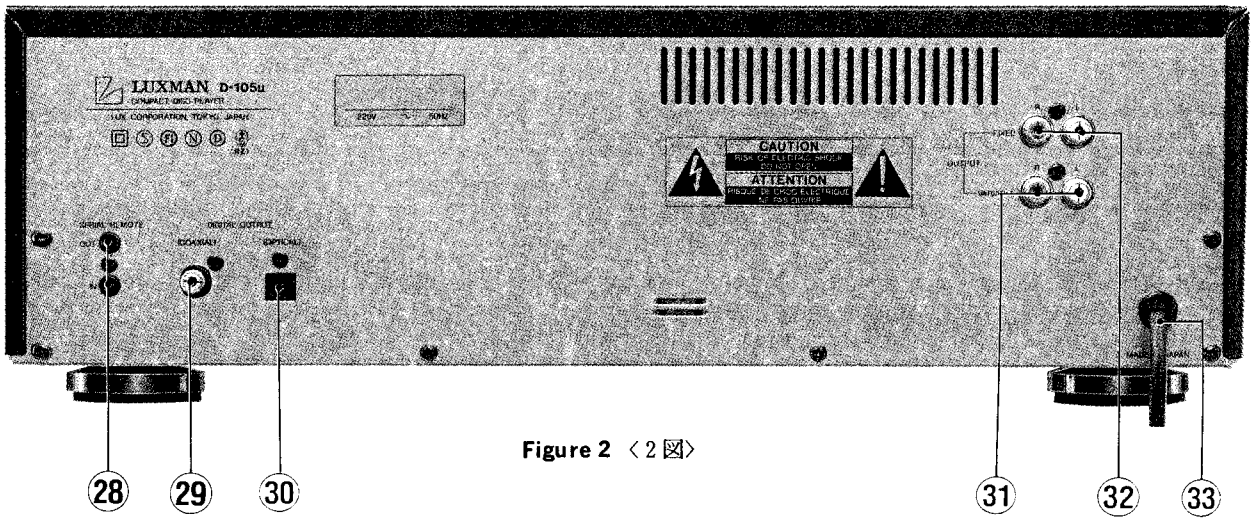


Figure 2 〈2図〉

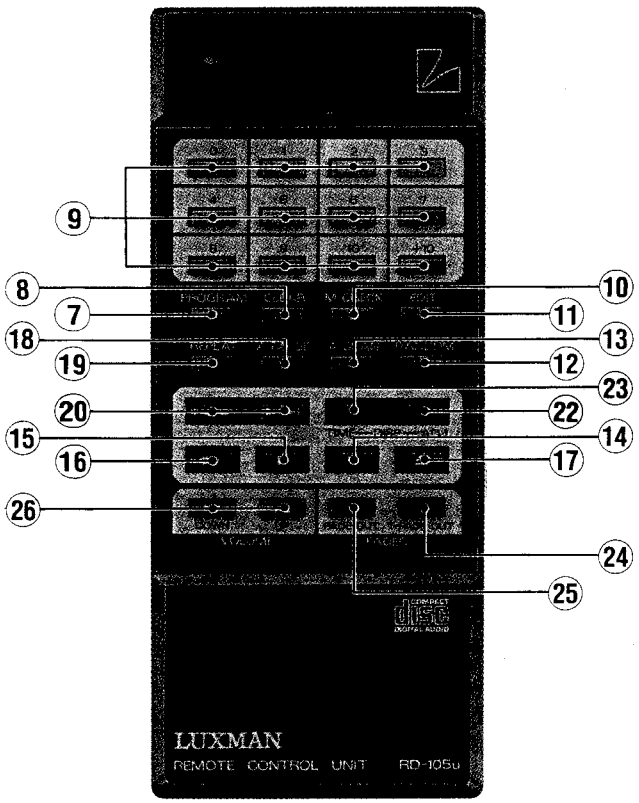


Figure 3 〈3図〉

① "display adjust" indicator
② POWER button
③ "remote sensor"
④ "pre-heating" button
⑤ Disc tray
⑥ Display
⑦ "program" button
⑧ "clear" button
⑨ Number buttons (0 to 10 and +10)
⑩ "M-Check" (memory check button)
⑪ "edit" button
⑫ "random" button
⑬ "A-Scan" (auto scan) button
⑭ STOP button (■)
⑮ PAUSE button (II)
⑯ PLAY button (▶)
⑰ "open/close" button
⑱ "A-pause" (auto pouse) button
⑲ "repeat" button
⑳ SKIPUP/SKIP DOWN buttons (▶▶I/I◀◀)
㉑ FORWARD/BACKWARD buttons (▶▶/◀◀)
㉒ DISPLAY ADJUST button
㉓ "T-display" button
㉔ TIME FADE-OUT button
㉕ FADE-OUT button
㉖ VOLUME "up/down" buttons (△▽)
㉗ "phones" jack
㉘ SERIAL REMOTE IN/OUT jacks
㉙ DIGITAL OUTPUT (COAX.) jack
㉚ DIGITAL OUTPUT (OPT.) jack
㉛ VARIABLE OUTPUT R/L jack
㉜ FIXED OUTPUT R/L jack
㉝ Power cord

〈Cabinet of Section〉

1. Removal of Top Cover

(1) Remove ten screws marked "●" as shown Figure 4.
(2) Pull out the top cover in the direction of the arrow as shown in Figure 4.

1. 上蓋の外し方

(1) 10本のネジ"●"を外します。(4図参照)
(2) 上蓋を矢印の方向に引き上げて外します。(4図参照)

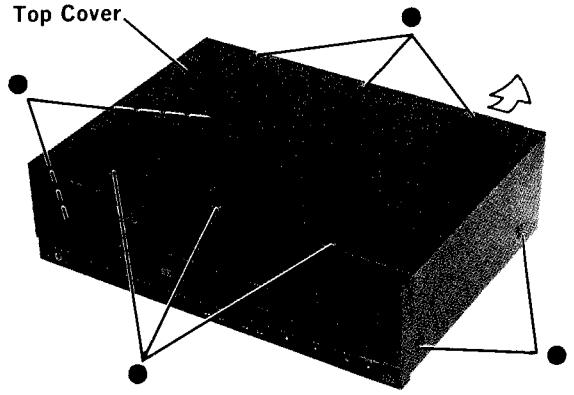


Figure 4 〈4図〉

2. Removal of the Front Panel

(1) After removing the Top Cover, open the Disk Tray and pull the Tray Panel in the direction as shown in Figure 5.
(2) Remove the Power switch knob as shown in Figure 5.
(3) Remove the solder (A) as shown in Figure 6.
Note: Be careful not to damage the parallel wires (29P) when removing the solder (A).
(4) Remove the three screws marked "○" as shown in Figure 7.
(5) Remove the hook (A) located in the two places as shown in Figure 6.
(6) Disconnect all wires connected to the following P.C. Boards: FL/Keyboard P.C. Board, Tube P.C. Board (1)/(2), Remote P.C. Board, Pre-Heat SW. P.C. Board, Head-Phone Jack P.C. Board.
(7) The Front Panel can now be removed with the following P.C. Boards in place: FL/Keyboard P.C. Board, Tube P.C. Board (1)/(2), Remote P.C. Board, Pre-Heat SW. P.C. Board, Head-Phone Jack P.C. Board, Fade P.C. Board.

2. フロントパネルの外し方

(1) 上蓋を外した後，ディスクトレイをオープンし，トレイパネルを矢印の方向に外します。(5図参照)
(2) パワースイッチツマミを外します。(5図参照)
(3) 半田(A)を外します。(6図参照)
注) 半田(A)を外す際，パラレルワイヤー (29P) が損傷し易いので十分注意して下さい。
(4) 3本のネジ (○印) を外します。(7図参照)
(5) 2箇所のフック(A)を外します。(6図参照)
(6) FL/Key Board 基板・Tube 基板(1)／(2)・Remote 基板・Pre-Heat SW 基板・Head-Phone Jack 基板以上の基板からつながる全てのワイヤーを外します。
(7) 以上でフロントパネルは FL/Key Board 基板 Tube 基板(1)／(2)・Remote 基板・Pre-Heat SW 基板・Head-Phone Jack 基板・Fade 基板の各基板が付いた状態で外すことができます。

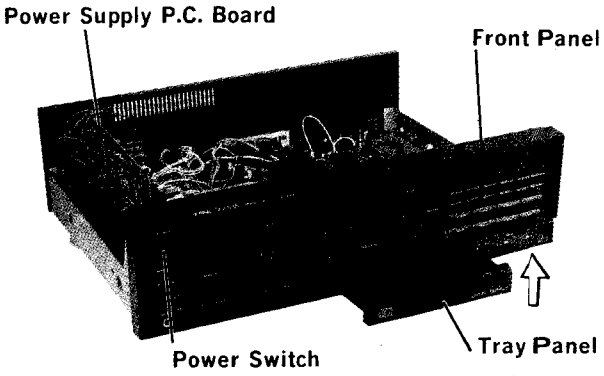


Figure 5 〈5図〉

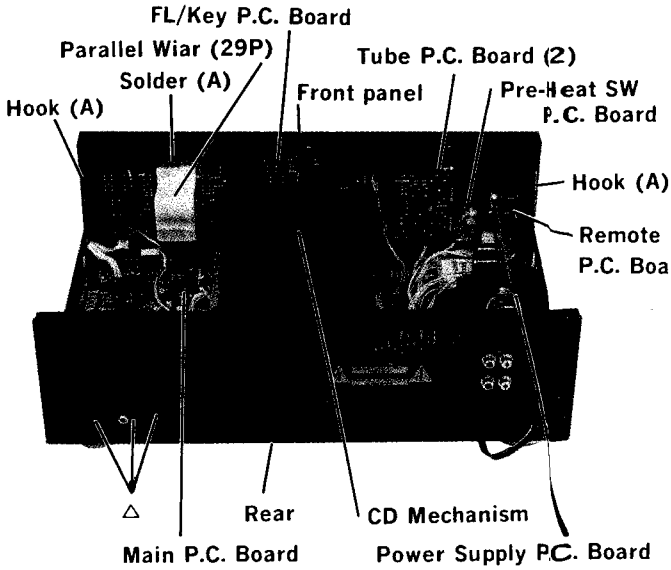


Figure 6 〈6図〉

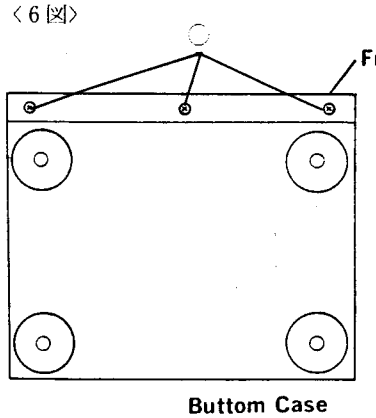


Figure 7 〈7図〉

3. Removal of the CD mechanism

(1) After removing the Front Panel remove the five screws marked "×" as shown in Figure 8.
(2) Disconnect all wires connected to the CD mechanism.
(3) the CD mechanism can now be removed.

3. CD メカニズムの外し方

(1) フロントパネルを外した後，5本のネジ（×印）を外します。（8図参照）
(2) CD メカニズムにつながる全てのワイヤーを外します。
(3) 以上でCD メカニズムは外れます。

4. Removal of the Main P.C. Board

(1) After removing the Top Cover, remove the seven screws marked "△" as shown in Figures 6 and 8.
(2) Hold down on "A" (see Fig. 9) and remove P.C. Board support (C) as shown in Figure 8.
(3) Disconnect all wires connected to the Main P.C. Board.
(4) The Main P.C. Board can now be removed.

4. MAIN 基板の外し方

(1) 上蓋を外した後，7本のネジ（△印）を外します。（6，8図参照）
(2) A部を押しながら（9図参照）基板サポート(C)を外します。（8図参照）
(3) MAIN 基板につながる全てのワイヤーを外します。
(4) 以上で MAIN 基板は外れます。

5. Removal of the FL/Keyboard P.C. Board

(1) After removing the Front Panel, remove the two screws marked "☆" as in Figure 10.
(2) Remove the hook (D) in the fifteen places as shown in Figure 10.
(3) Disconnect the 6P connector connected to the Fade P.C. Board.
(4) The FL/Keyboard P.C. Board can now be removed.

5. FL/Keyboard 基板の外し方

(1) フロントパネルを外した後2本のネジ（☆印）を外します。(10図参照)
(2) 15箇所のフック(D)を外します。(10図参照)
(3) Fade 基板につながる1つのコネクター（6P）を外します。
(4) 以上で FL/Keyboard 基板は外れます。

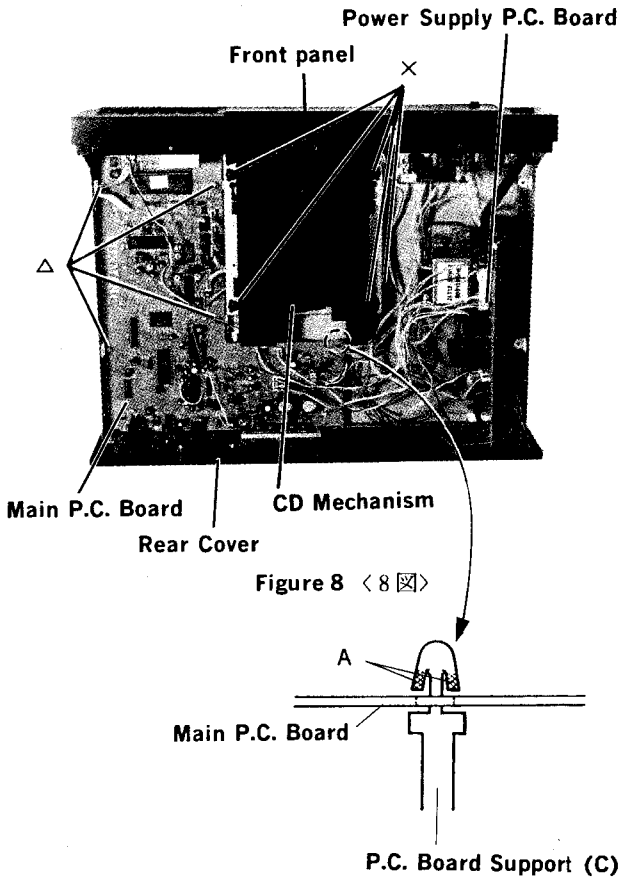


Figure 8 〈8図〉

Figure 9 〈9図〉

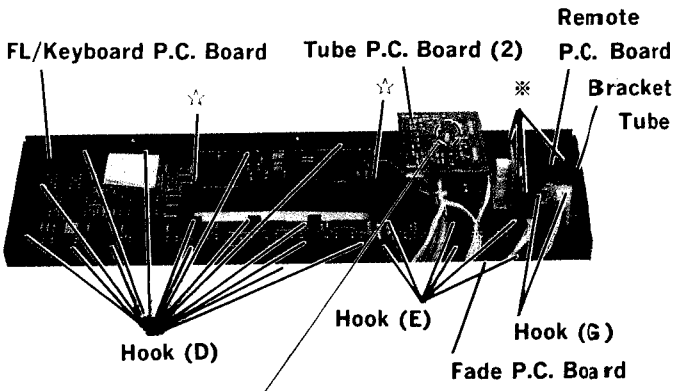


Figure 10 〈10図〉

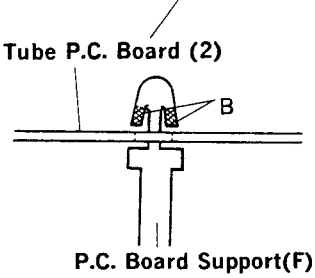


Figure 11 〈11図〉

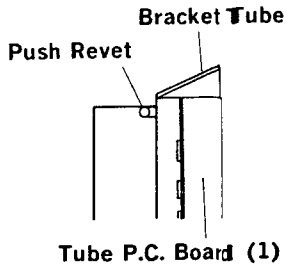


Figure 12 〈12図〉

6. Removal of the Fade P.C. Board

(1) After removing the Front Panel, remove the hook (E) in the six places as shown in Figure 10.
(2) Disconnect the 6P connector connected to the FL/Keyboard P.C. Board.
(3) The Fade P.C. Board can now be removed.

6. Fade基板の外し方

(1) フロントパネルを外した後，6箇所のフック(E)を外します。(10図参照)
(2) FL/Keyboard基板につながる1つのコネクター（6P）を外します。
(3) 以上でFade基板は外れます。

7. Removal of the Tube P.C. Board (2)

(1) After removing the Front Panel, hold down on "B" (see Fig. 11) and remove the P.C. Board support (F) as shown in Figure 10.
(2) Disconnect the two 6P connectors connected to the Tube P.C. Board (2).
(3) The Tube P.C. Board (2) can now be removed.

7. Tube基板(2)の外し方

(1) フロントパネルを外した後，B部分を押しながら(11図参照）基板サポート(F)を外します。(10図参照)
(2) Tube基板(1)につながる2つのコネクター（それぞれ6P）を引き抜きます。
(3) 以上でTube基板(2)は外れます。

8. Removal of the Tube P.C. Board (1)

(1) After removing the Front Panel and Tube P.C. Board (2), remove the four screws marked "*" and the Tube retainer as shown in Figure 10.
(2) Remove the Push rivet shown in Figure 12.
(3) The Tube P.C. Board (1) can now be removed.

8. Tube基板(1)の外し方

(1) フロントパネルとTube基板(2)を外した後，4本のネジ（※印）を外し，チューブ取付金具を外します。(10図参照)
(2) 1個のプッシュリベットを外します。(12図参照)
(3) 以上でTube基板(1)は外れます。

9. Removal of the Remote P.C. Board

(1) After removing the Tube retainer, remove the hook (G) in the two places as shown in Figure 10.
(2) The Remote P.C. Board can now be removed.

9. Remote基板の外し方

(1) チューブ取付金具を外した後，2箇所のフック(G)を外します。(10図参照)
(2) 以上でRemote基板は外れます。

〈CD Mechanism Section〉

1. Removal of Disc Tray

(1) Pull out the disc tray in the arrow direction by pressing slant position of the disc tray as shown in Figures 13 and 14.
(2) After disengaging one claw (A), remove the switch arm as shown in Figure 15.
(3) Spread two claws (B) toward outside at the both sides of the disc tray and draw out the disc tray as shown in Figure 14.

1. ディスクトレイの外し方
(1) ディスクトレイの斜線部分を押し，ディスクトレイを矢印方向に引き出す。(13，14図参照)
(2) 爪(A)を外し，スイッチアームを外します。(15図参照)
(3) ディスクトレイ両サイドの爪(B)を両外側に押し広げてディスクトレイを引き抜きます。(14図参照)

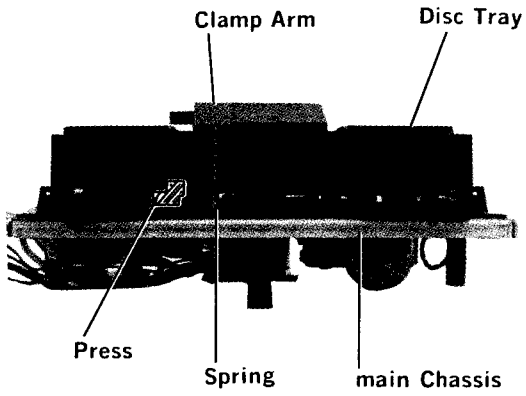


Figure 13 〈13図〉

2. Removal of Clamp Arm

(1) Remove one spring between the main chassis and the clamp arm as shown in Figure 13.
(2) After pulling out the disc tray frontward, remove the clamp arm by pressing one claw (C) as shown in Figure 14.

2. クランプアームの外し方
(1) メインシャーシとクランプアームとを止めているバネを外します。(13図参照)
(2) ディスクトレイを前面に引き出した後爪(C)を押しながらクランプアームを外します。(14図参照)

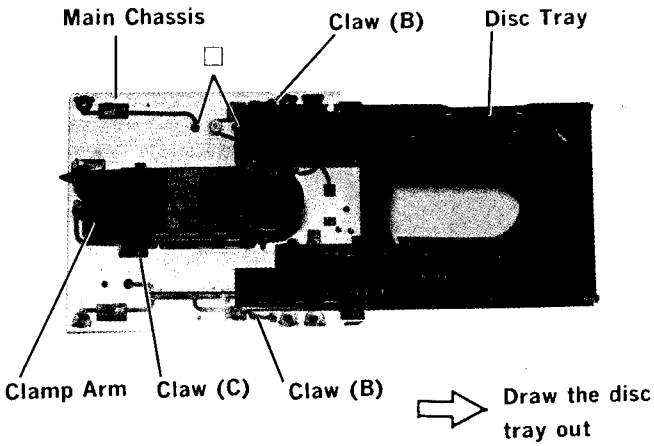


Figure 14 〈14図〉

3. Removal of Optical Pick-up Arm

(1) After removing three screws marked "○", remove the sub-chassis as shown in Figure 15.

Note: When three screws are removed, three springs (one is black) appear under the damper bush. When assembling the sub-chassis put the black spring into the place marked "☆".

(2) While pressing two claws (D) in toward pull out two shafts in the arrow direction as shown in Figure 17.

3. 光学系ピックアップの外し方

(1) 3本のネジ（○印）を外し，サブシャーシを外します。

注意) 3本のネジを外すとそれぞれのダンパーブッシュの下に3本のバネ（内1本が黒色）があります。サブシャーシ取り付け時には，黒色バネを"☆"色の部分に入れて取り付けて下さい。(15図参照)

(2) 2ケ所の爪(D)を両方共に内側に押しながら，2本のシャフトを矢印の方向に引き抜きます。(17図参照)

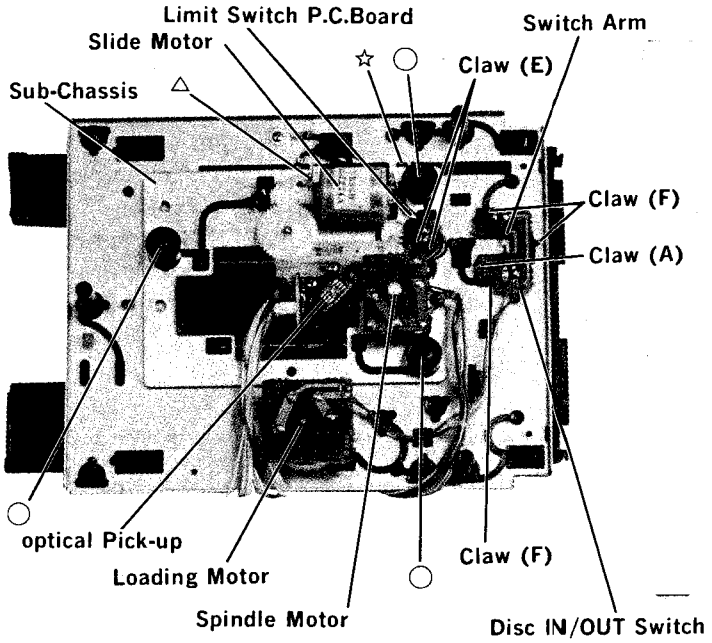


Figure 15 〈15図〉

4. Removal of Spindle Motor

(1) By grasping plastic part, lift the disc table straight up without applying pressure to metal part.

Note: For assembling the disc table, insert the disc table with pressure so that the height from the disc table top to the sub-chassis surface becomes 19.9±0.1mm as shown in Figure 18.

(2) Remove two screws marked "×" as shown in Figure 17.

4. スピンドルモーターの外し方

(1) ディスクテーブルを金属部分に負荷をかけないで樹脂の部分をつかみまっすぐ上に引き抜きます。

注意) ディスクテーブルの組立て時，サブシャーシ上面からディスクテーブルの上面までの高さ19.9±0.1mmの位置に圧入して下さい。(18図参照)

(2) 2本のネジ（×印）を外します。(17図参照)

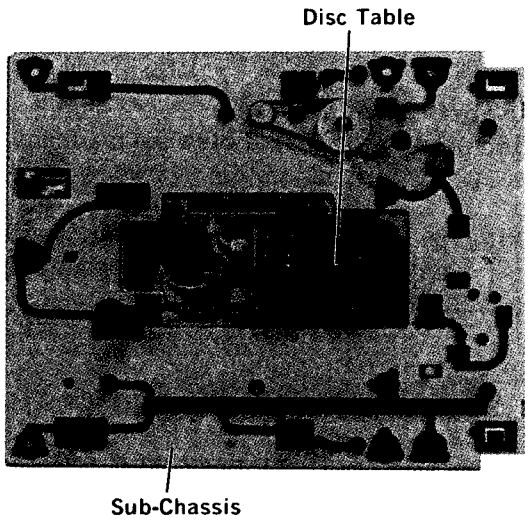


Figure 16 〈16図〉

5. Removal of Slide Motor

(1) Remove one screw marked "△" and lift up the motor as shown in Figure 15.

5. スライドモーターの外し方

(1) 1本のネジ（△印）を外し，上に持ち上げます。(15図参照)

6. Removal of Loading Motor

(1) Remove one belt and two screws marked "□" as shown in Figure 14.

6. ローディングモーターの外し方

(1) ベルトを外し，2本のネジ（□印）を外します。(14図参照)

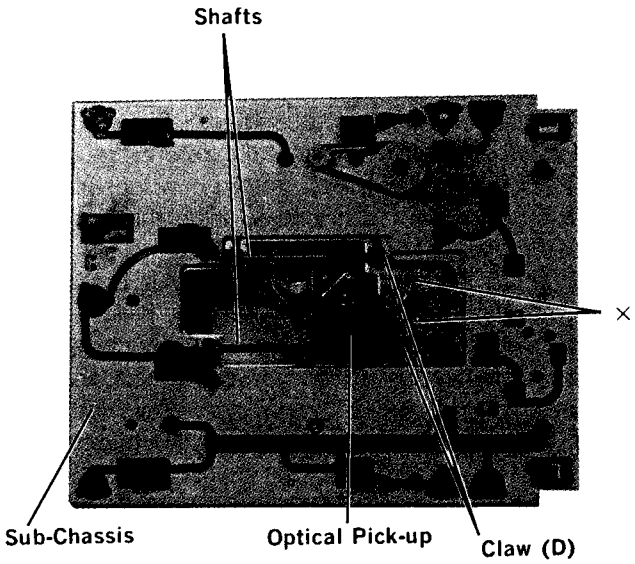


Figure 17 〈17図〉

7. Removal of Limit Switch P.C. Board

(1) Remove two claws marked "E" as shown in Figure 15.

7. リミットスイッチ基板の外し方

(1) 2ケ所の爪(E)を外します。(15図参照)

8. Removal of Disc IN/OUT Switch P.C.Board

(1) Remove three claws marked "F" as shown in Figure 15.

8. ディスク IN/OUT スイッチ基板の外し方

(1) 3ケ所の爪(F)を外します。(15図参照)

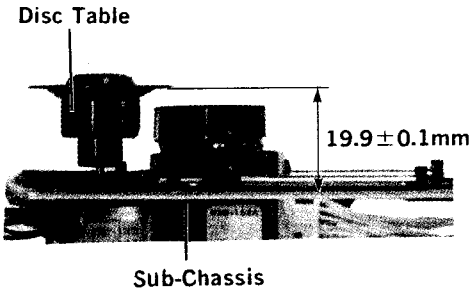


Figure 18 〈18図〉

〈Service Notes〉

1. Notes on Laser Diode Emission and Focus Search Operation Check

(1) Caution when checking Laser Diode emission.
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30cm away from the objective lens.

(2) Check of the Laser Diode And Focus Search Operation
With no disc loaded and the disc tray closed, when switching the power on, check that the operation as shown in the below Figure 19 is performed, by observing the objective lens.
①Optical pick-up moves in outer-circle and inner-circle directions.
②Laser beam emits spreadingly.
③The objective lens perform up-and-down three times.

1. レーザーダイオードおよびフォーカスサーチ動作の確認

(1) レーザーダイオードの発光確認時の注意
本機のレーザー光は，光学系ピックアップ内の対物レンズによってディスクの反射面上に焦点を結ぶように集光されています。したがって，レーザーダイオードの発光を確認する時は，対物レンズより30cm 以上目を離して下さい。

(2) レーザーダイオードおよびフォーカスサーチ動作のチェック方法
ディスクを入れないでディスクトレイが閉じた状態から，POWER スイッチを ON させた時，対物レンズおよび光学系ピックアップを見て，下記の様な動作が行なわれるか確認する。(19図参照)
①光学系ピックアップが外周方向に動き，また内周方向に動く。
②レーザー光の拡散した，赤い色の光が見える。
③対物レンズの上下運動。(3回)

Remove the Clamp Arm
(See Disassembly Instruction of Clamp Arm)

クランプアームを取り除く
(クランプアームの分解方法の項参照)

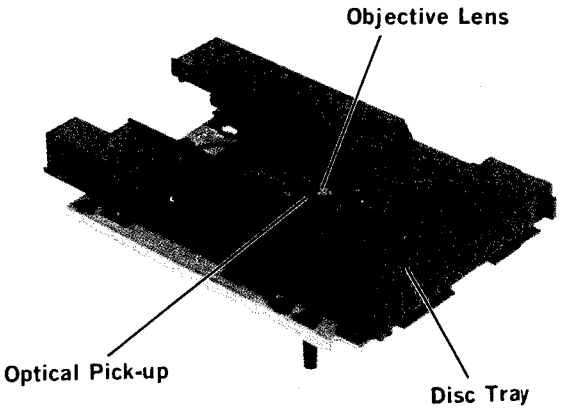


Figure 19 〈19図〉

2. Caution For Electrostatic Breakdown [Notes on Handling The Base Unit (KSS-152A)]

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc., on clothing and the human body.

The following notes are examples for reference purposes :

①Perform repair with ground ring on the hands and a conductive gum mat.

②Grasp the slide base when handling.

③When removing the pick-up arm shortcircuit by soldering as shown in the Figure 20 below and then remove the connector.

④When mounting the pick-up arm, after inserting the connector, remove the soldered short-circuiting.

Notes : For making and removing the short-circuit, be sure to use an iron with its metal part grounded or it's insulation resistance is higher than 10M ohms (DC 500V), and the tip temperature is lower than 320°C. The soldering and desoldering should be made quickly.

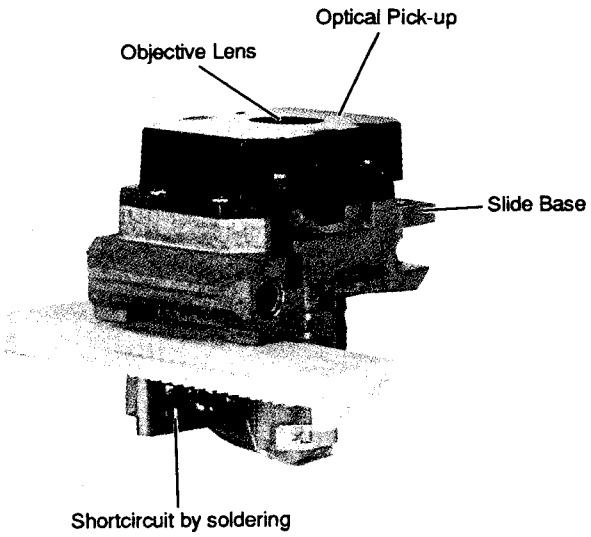


Figure 20 〈20図〉

2. 静電破壊についての注意

[KSS-152A（光学系ピックアップ）取扱時の注意]

光学系ピックアップ内のレーザーダイオードは，衣服や人体に帯電した静電荷等で電位差を生じることにより，静電破壊することがあります。静電破壊に対しての注意として下記のことに十分注意して取扱ってください。

①取扱い時には，人体アースおよびアースマットを用いて接地してから作業を行ってください。

②取扱いは，スライドベースを持って行って下さい。

③取りはずす時，20図のように半田ショートさせてから，コネクターを外して下さい。

④取付け時，コネクターを差し込んだ後，半田ショートの部分を開放して下さい。

注意）半田ショートおよび開放時には，金属部分を接地させた半田ゴテか，もしくは通電5分後の絶縁抵抗が10MΩ以上(DC500V)のもので，コテ先温度が320°C以下の半田ゴテを使用してすみやかに行って下さい。

Adjustment Procedures

1. Compact Disc Section

(1) Connections

(1) 接続図

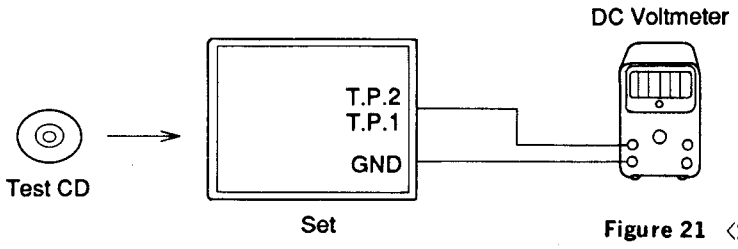


Figure 21 〈21図〉

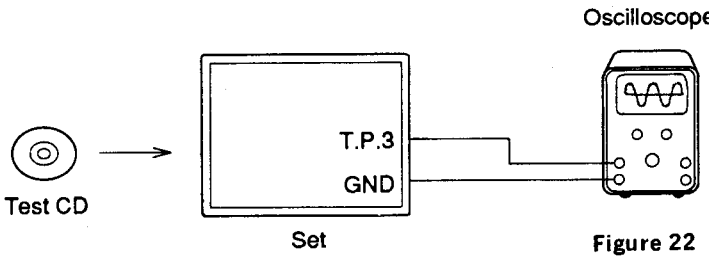


Figure 22 〈22図〉

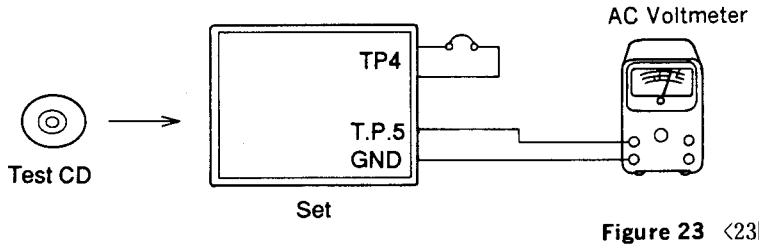


Figure 23 〈23図〉

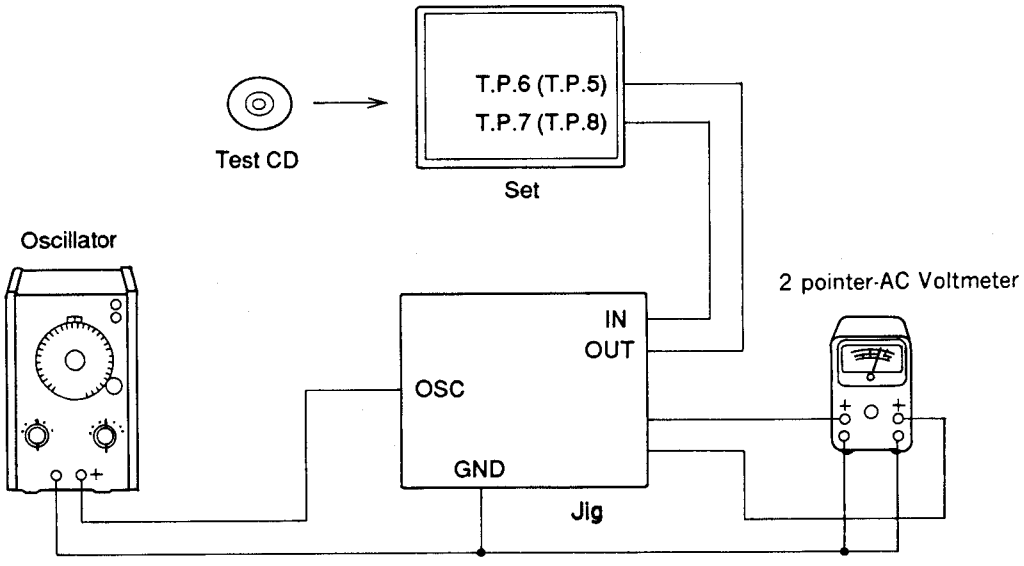


Figure 24 〈24図〉

(2) Control Settings

Power Switch .....ON
Play Switch .....ON
Others .....OFF

(3) Test CD

Use the 2nd trak on the SONY YEDS-18 CD or A-BEX TCD-782 CD.

(4) Adjustment Procedures

Step	Description	Connections	Oscillator	Test Point	Adjustment
1	VCO Adjsutment	Figure 21	—	T.P.1 T.P.2	Take measurement of the voltage at the T.P.1. Then adjsut VR202 so that the output voltage at the T.P.2 becomes 1/2 of the voltage at the T.P.1.
2	Focus Bias Adjustment	Figure 22	—	T.P.3	Adjust VR201 so that the waveform of output at the T.P.3 becomes maximum as shown on Fig. 25.
3	Tracking Error Balance Adjustment	Figure 23	—	T.P.4 T.P.5 T.P.6	After shortcircuiting between T.P.4 and T.P.5 and turning VR204 fully counter-clockwise, adjsut VR203 so that the voltage is 0V±50mV. After the adjustment set VR204 to its center position.
4	Tracking Gain Adjustment	Figure 24	1kHz 100mV	T.P.6 T.P.7	Adjust VR204 so that both arms of the voltmeter come at the same position.
5	Focus Gain Adjustment	Figure 24	1kHz 100mV	T.P.8 T.P.9	Adjust VR205 so that both arms of the voltmeter come at the same position.

(2) スイッチ類のセット位置

電源スイッチ ……ON

プレイスイッチ ……ON

その他のスイッチ ……OFF

(3) 使用テスト CD

SONY YEDS-18（2曲目）又は，A-BEX TCD-782（2曲目)。

(4) 調整方法

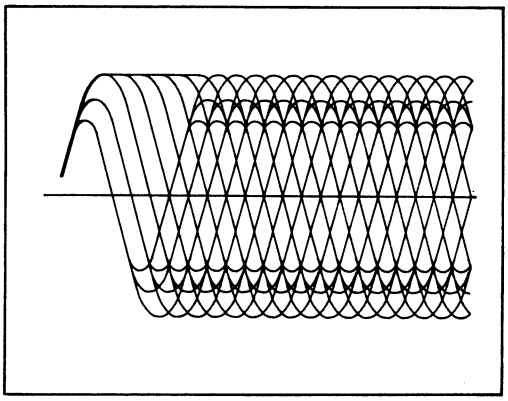


Figure 25 〈25図〉

順序	調整項目	接続図	オシレーター	テスト ポイント	調 整 方 法
1	VCO 調整	21図	—	T.P.1 T.P.2	T.P.1の電圧を測定します。次に T.P.2の出力電圧が T.P.1の電圧の1/2になる様に VR202で調整します。
2	フォーカス バイアス調整	22図	—	T.P.3	T.P.3の出力が波形が25図の様に最大になる様に VR201で調整します。
3	トラッキングエラー バランス調整	23図	—	T.P.4 T.P.5 T.P.6	T.P.4, T.P.5の間をショートして VR204を反時計方向にしぼりきり，T.P.6の出力電圧が0V±50mVになる様に VR203で調整します。 調整後，VR204を中央付近にもどす事。
4	トラッキング ゲイン調整	24図	1kHz 100mV	T.P.6 T.P.7	2針 AC 電圧計の針が重なる様に VR204で調整します。
5	フォーカス ゲイン調整	24図	1kHz 100mV	T.P.8 T.P.9	2針 AC 電圧計の針が重なる様に VR205で調整します。

Adjustment Location

Main P.C. Board (Component Side) AD/UZ/AG/UQ model

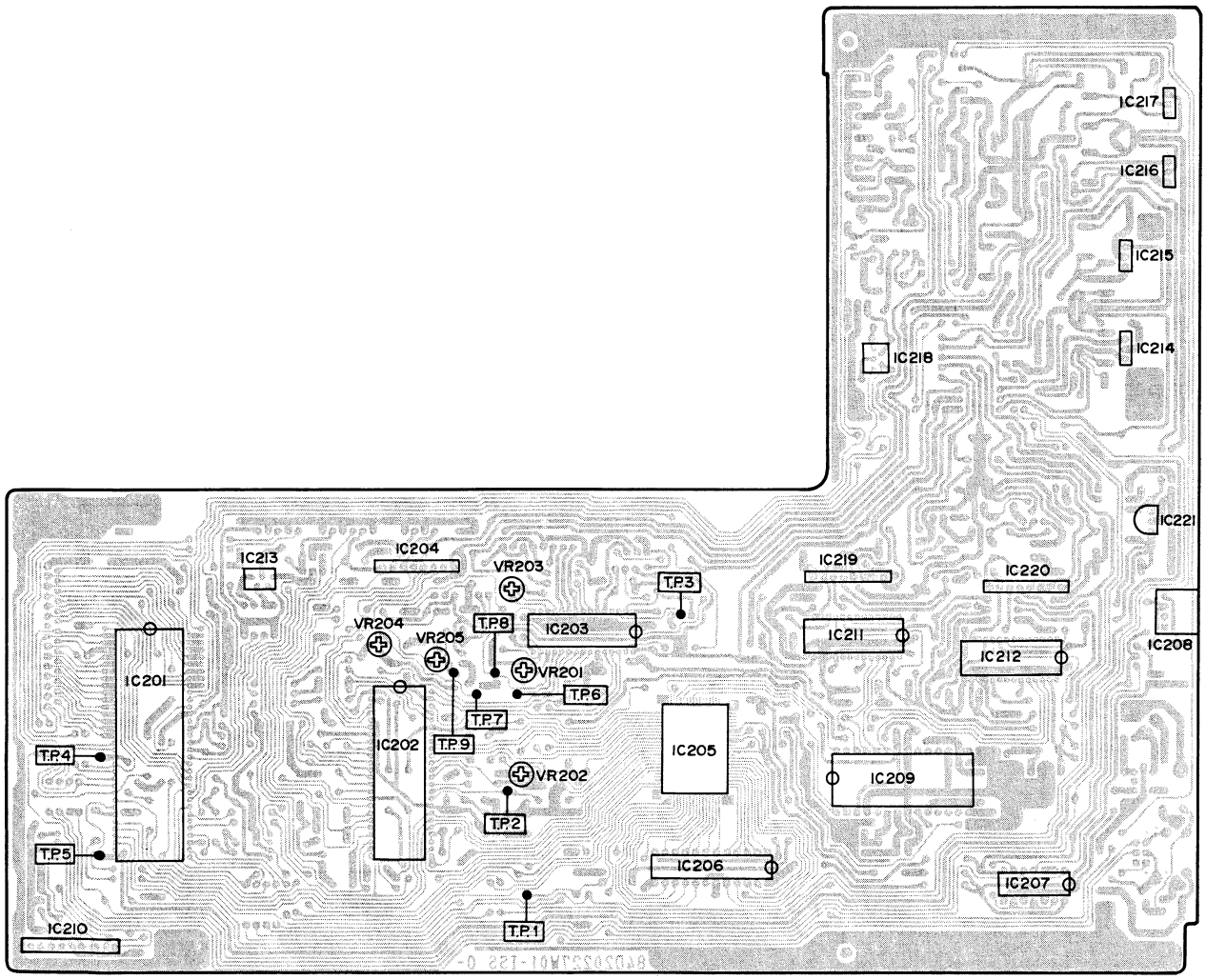


Figure 26 〈26図〉

Main P.C. Board (Component Side) JA/EK model

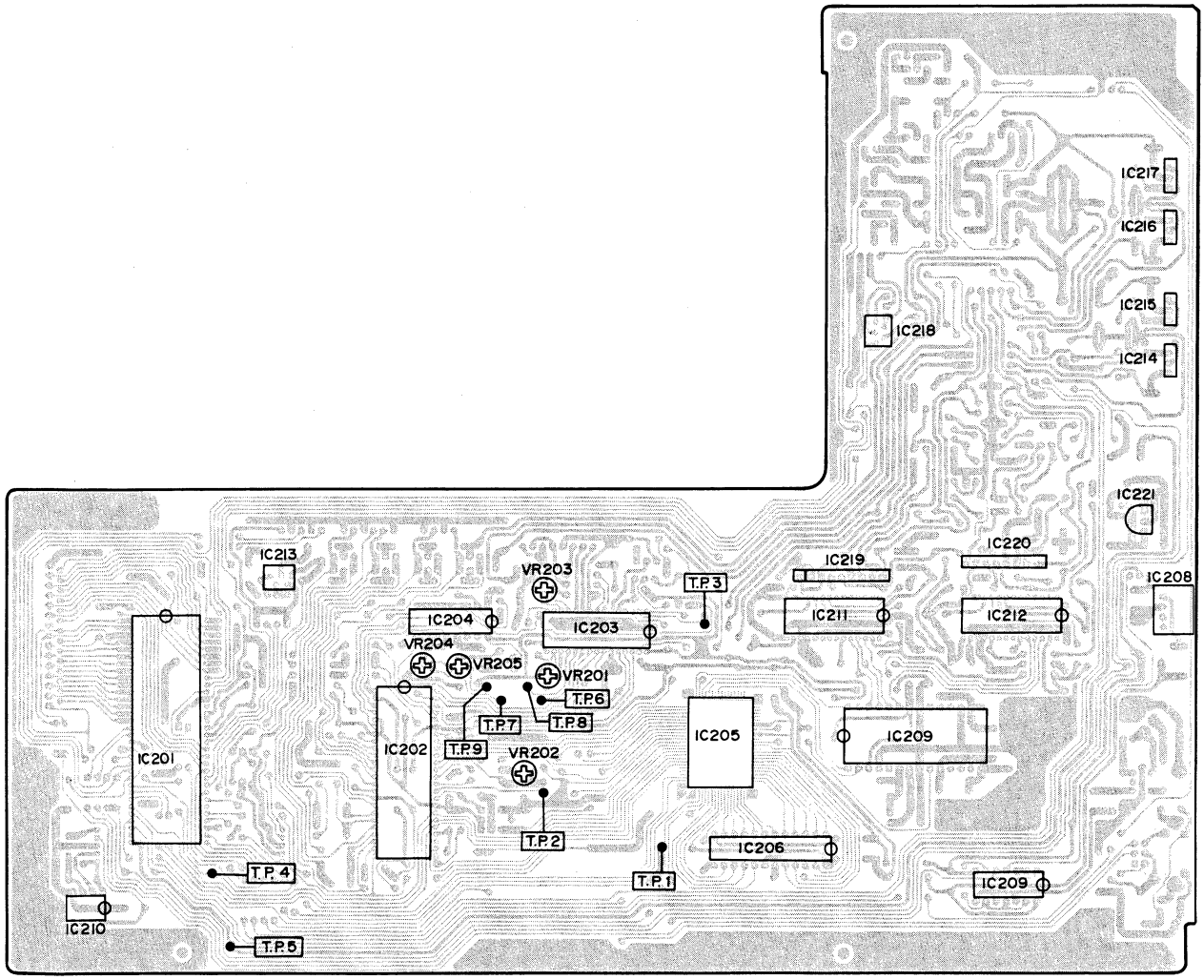
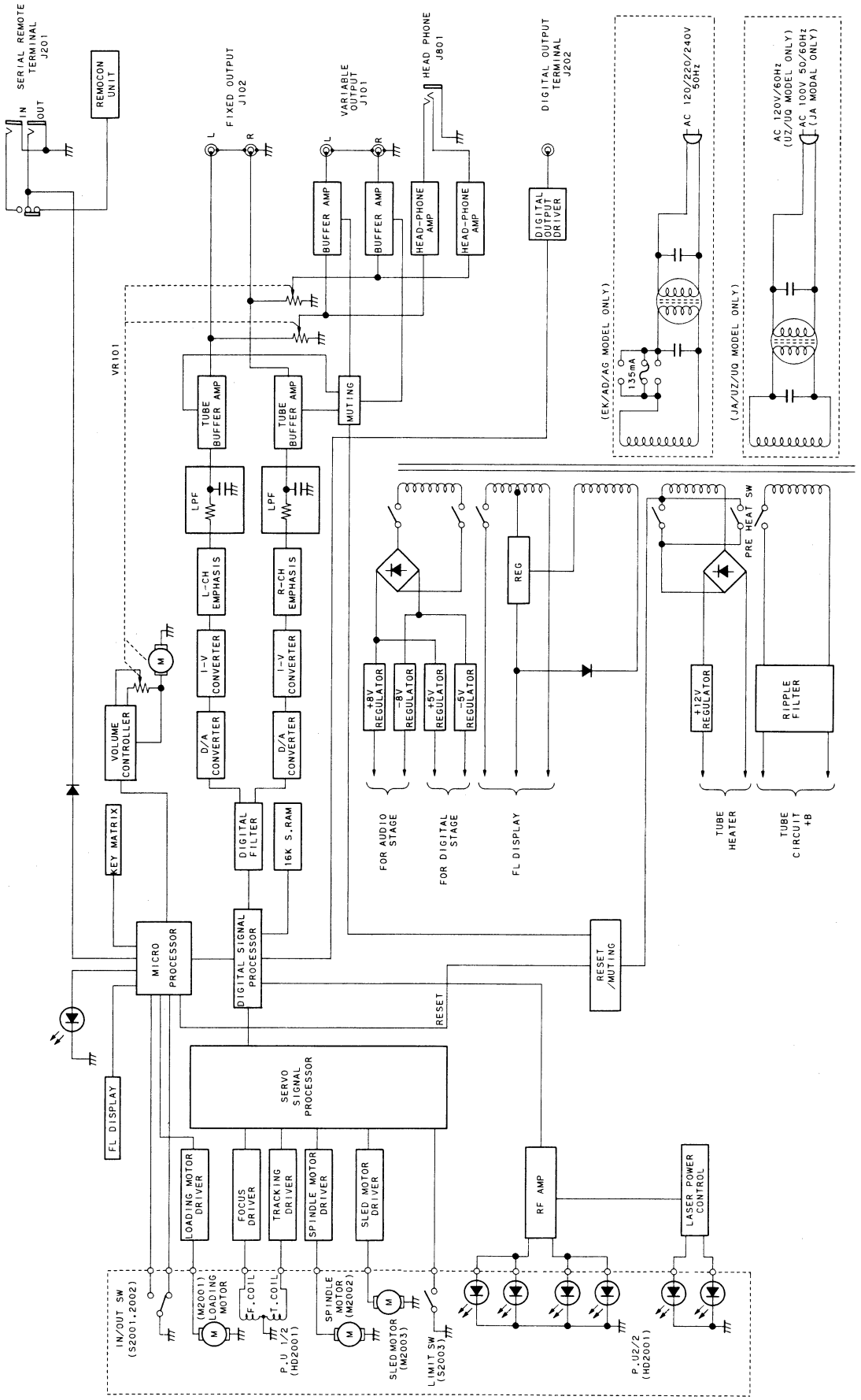


Figure 27 〈27図〉

Block Diagram



Schematic Diagram <D-105U AD/UZ/AG/UQ>(1/2)

NOTE
1.All resistance values are in ohms. K=1,000 M=1,000,000
2.All capacitance values are in microfarads. P= 1/1,000,000

Voltage Measuring Conditions
1.Power Supply Voltage :AC120V,/220V,240V,50Hz(AD/AG moel only)
AC120V,60Hz(UZ/UQ moel only)
2.Measuring Mater :Digital Multimeter
3.Measuring Point Reference :Between Ground
4.Measuring Conditions :NO Signal Input
AT Play Mode Test CD
(Use the 2nd trak on the YED-18)

IC201			
1	-29.3V	33	5V
2	-22.6V	34	1.4V
3	-27V	35	4.9V
4	-27V	36	0V
5	-22.6V	37	4.8V
6	-32.8V	38	—
7	-32.8V	39	0V
8	-32.8V	40	0V
9	-32.8V	41	0V
10	-32.8V	42	0V
11	-32.8V	43	2.2V
12	-32.8V	44	-19V
13	-32.8V	45	-19.1V
14	-32.8V	46	-18.7V
15	-32.8V	47	0V
16	0V	48	2.3V
17	-7.6V	49	2.3V
18	4.8V	50	0V
19	-35.8V	51	0V
20	-7.4V	52	—
21	0V	53	5V
22	5V	54	0V
23	0.4V	55	0V
24	5V	56	0V
25	5V	57	-22.2V
26	1.4V	58	-24.2V
27	1.4V	59	-23.8V
28	4.9V	60	-17.1V
29	0V	61	-10.1V
30	4.8V	62	-15.6V
31	—	63	-22.5V
32	5V	64	-29.8V

IC204	
1	11.2V
2	0.6V
3	0V
4	0V
5	-12V
6	0.6V
7	0V
8	0V

IC203	
1	0V
2	1.1V
3	0V
4	2.5V
5	2.8V
6	-4.8V
7	0V
8	0V
9	0V
10	0V
11	0V
12	-0.6V
13	-0.4V
14	0V
15	-2.2V
16	-1.9V
17	-4.9V
18	0V
19	0V
20	0V
21	-4.8V
22	0V
23	-1.7V
24	-1.2V
25	0V
26	2.4V
27	2.4V
28	4.9V
29	0.2V
30	4.9V

IC206	
1	2.5V
2	2.5V
3	2.4V
4	2.4V
5	2.4V
6	2.4V
7	2.4V
8	2.4V
9	1.9V
10	1.9V
11	1.9V
12	0V
13	1.9V
14	1.9V
15	1.9V
16	1.9V
17	2V
18	2.6V
19	*3
20	2.6V
21	4.3V
22	2V
23	2.6V
24	4.9V

*3 : 1.2~3.5V

IC207	
1	2.3V
2	2.4V
3	2.4V
4	2.4V
5	2.3V
6	2.4V
7	0V
8	2.4V
9	2.4V
10	2.4V
11	2.4V
12	2.4V
13	2.4V
14	4.9V

IC208	
1	4.2V
2	2.6V
3	—
4	—

IC205			
1	0V	41	2.4V
2	-4.8V	42	2.4V
3	2.5V	43	2.4V
4	2.7V	44	2.5V
5	2.4V	45	2.5V
6	2.4V	46	2.8V
7	4.9V	47	2V
8	2.4V	48	*2
9	2.4V	49	4.3V
10	0V	50	2.6V
11	1.5V	51	—
12	0V	52	0V
13	4.9V	53	2.3V
14	5V	54	—
15	1.4V	55	0V
16	5V	56	0V
17	0V	57	4.9V
18	4.8V	58	0V
19	0V	59	0V
20	—	60	—
21	—	61	—
22	—	62	—
23	1.4V	63	—
24	0V	64	—
25	5V	65	—
26	4.9V	66	—
27	2.3V	67	—
28	4.9V	68	—
29	2V	69	—
30	1.9V	70	—
31	1.9V	71	—
32	1.9V	72	—
33	4.9V	73	4.9V
34	1.9V	74	—
35	1.9V	75	—
36	1.9V	76	2.3V
37	1.9V	77	—
38	2.4V	78	2.5V
39	2.4V	79	2.4V
40	2.4V	80	2.5V

*2 : 1.2~35V

	IC105	IC214	IC215	IC216	IC217	IC221
1	15.7V	5.7V	-4.9V	7.9V	-7.8V	5V
2	0V	0V	-12.8V	0V	-12.8V	0V
3	11.9V	12V	0V	12V	0V	7.9V

	IC101	IC102	IC219	IC220	IC210
1	0V	0V	0V	0V	0V
2	0V	0V	0V	0V	0V
3	0V	0V	0V	0V	-8V
4	-7.8V	-7.8V	-7.8V	-7.8V	0V
5	0V	0V	0V	0V	—
6	0V	0V	0V	0V	—
7	0V	0V	0V	0V	—
8	7.9V	7.9V	7.9V	7.9V	12V

	IC213	IC218
1	0~4.9V	0~4.9V
2	-4.9~4.9V	-4.9~4.9V
3	-12.8V	-12.8V
4	-4.9~4.9V	-4.9~4.9V
5	12V	12V

CAUTION:
The ⚠ mark,the symbol numbers in the schematic diagram designate components which have special charecteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

IC202			
1	-4.9V	25	-4.9V
2	-4.9V	26	0V
3	0V	27	—
4	0V	28	5V
5	0V	29	0V
6	0V	30	5V
7	0V	31	5V
8	0V	32	0V
9	0V	33	2.4V
10	0V	34	2.5V
11	1V	35	2.3V
12	0V	36	2.3V
13	0.3V	37	3.5V
14	0V	38	2.5V
15	0V	39	4.9V
16	4.9V	40	2.5V
17	0V	41	4.8V
18	-3.2V	42	2.5V
19	0V	43	4.9V
20	*1	44	0V
21	0V	45	1.1V
22	-4.9V	46	2.4V
23	-4V	47	0V
24	4.8V	48	0V

*1 : -0.7~0.9V

	IC209	IC211	IC212
1	2.5V	—	—
2	2.3V	—	—
3	4.9V	—	—
4	4.9V	—	—
5	—	—	—
6	2.6V	—	—
7	2.6V	—	—
8	0V	2.3V	2.3V
9	2V	5V	5V
10	4.9V	2V	2V
11	—	3.1V	3.1V
12	—	0V	0V
13	—	0V	0V
14	4.7V	0V	0V
15	4.9V	0V	0V
16	4.9V	-7.8V	-7.8V
17	4.9V	0V	0V
18	—	0V	0V
19	—	4.9V	4.9V
20	—	—	—
21	0V	—	—
22	4.9V	—	—
23	2.1V	3.4V	3.4V
24	2.1V	1.9V	1.9V
25	3.7V	3.7V	3.7V
26	1.9V	2V	2V
27	—	-7.8V	-7.8V
28	2.5V	—	—

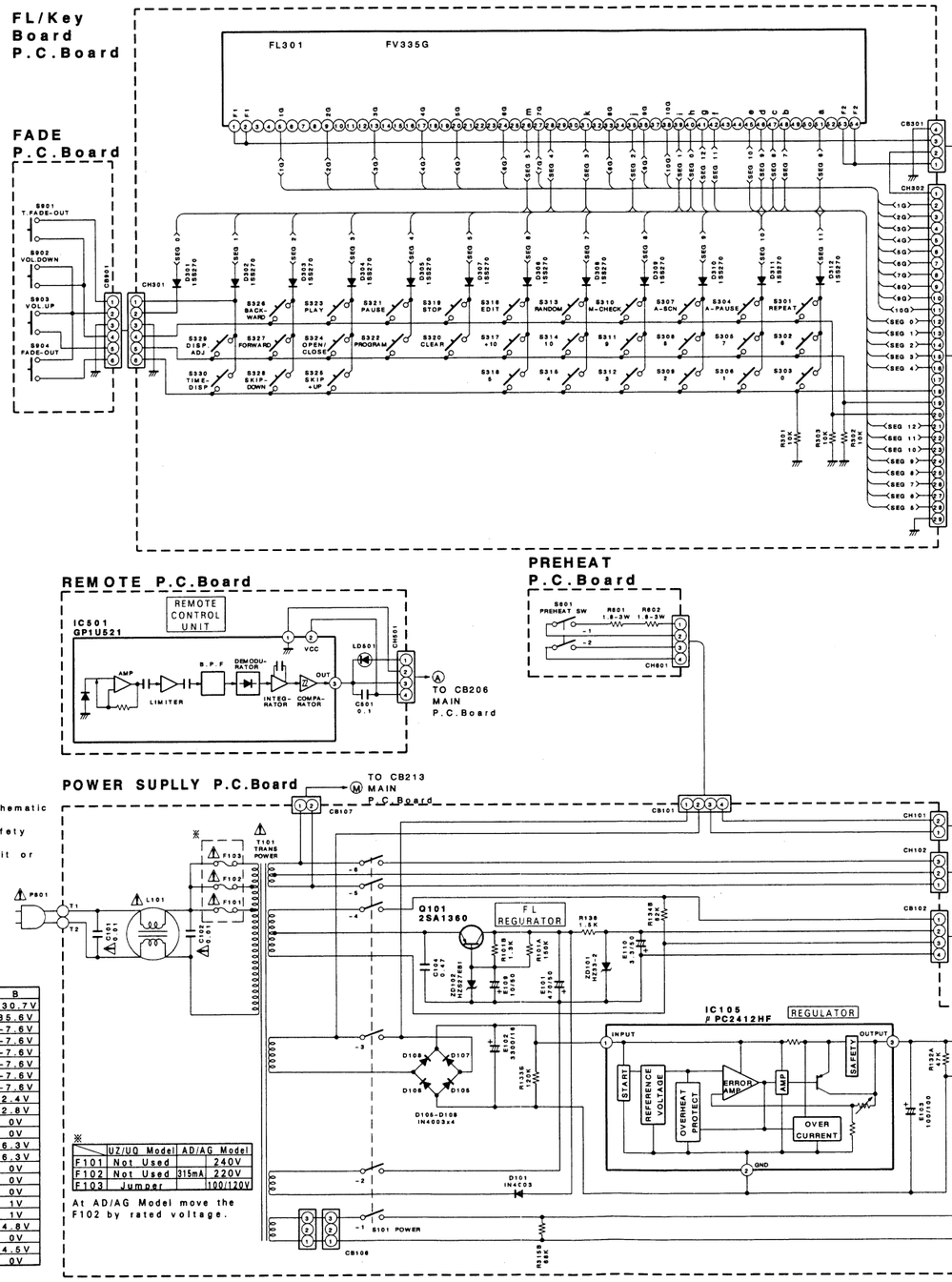
	E	C	B
Q101	-30.2V	-43.8V	-30.7V
Q102	85.1V	130.5V	85.6V
Q103	0V	0V	-7.6V
Q104	0V	0V	-7.6V
Q105	0V	0V	-7.6V
Q106	0V	0V	-7.8V
Q107	0V	0V	-7.8V
Q108	0V	0V	-7.8V
Q201	2V	0V	2.4V
Q204	0V	0V	2.8V
Q205	11.7V	-7.5V	0V
Q206	4.9V	4.9V	0V
Q207	0V	0V	6.3V
Q208	0V	0V	6.3V
Q209	0V	0V	0V
Q210	0V	0V	0V
Q211	0V	0V	0V
Q212	0.6V	11.2V	1V
Q213	0.6V	-12V	1V
Q223	4.5V	0V	4.8V
Q224	0V	4.5V	0V
Q225	0V	0V	4.5V
Q226	0V	0V	0V

※

	UZ/UQ Model	AD/AG Model
F101	Not Used	240V
F102	Not Used	315mA 220V
F103	Jumper	100/120V

At AD/AG Model move the F102 by rated voltage.

IC'S	IC501	IC105
TRANSISTORS (Q)	Q101	Q102



/UQ>(1/2)

IC105

Q101

Q102

IC102
IC101

Q103 Q105 Q702
Q104 Q106 Q701

FV335G

PICK UP

PHOTO DIODE

HD2001
HEAD OPTICAL PICK UP

TO CB204 MAIN P.C.Board

TO CB205 MAIN P.C.Board

TO CB203 MAIN P.C.Board

TO CB201 MAIN P.C.Board

TO CB202 MAIN P.C.Board

TO CB212 MAIN P.C.Board

ASS'Y MECHA

M2001 LOADING MOTOR

S2001 OPEN/CLOSE SW
S2002

M2002 SPINDOL MOTOR

S2003 LIMIT SW

M2003 SLIDE MOTOR

TUBE 2 P.C.Board

TUBE1 P.C.Board

Q702 6CG7

Q701 6CG7

TO CB209 MAIN P.C.Board

PREHEAT P.C.Board

S601 PREHEAT SW

TO CB206 MAIN P.C.Board

TO CB213 MAIN P.C.Board

TO CB211 MAIN P.C.Board

TO CB210 MAIN P.C.Board

Q101 2SA1360

FL REGURATOR

IC105 μPC2412HF REGULATOR

INPUT
OUTPUT
START
REFERENCE VOLTAGE
OVERHEAT PROTECT
ERROR AMP
AMP
SAFETY
OVER CURRENT
GND

D105-D108 IN4003x4

D101 IN4C03

S101 POWER

RIPPLE FILTER

Q102 2SC3298

D102 IN4003

D103 IN4003

D104 IN4003

TO CB207 MAIN P.C.Board

TO CB208 MAIN P.C.Board

IC102 M5238P

BUFFER AMP

Q103 2SD1302

Q104 2SD1302

Q105 2SD1302

Q106 2SD1302

MUTING

Q108 2SD1302

Q107 2SD1302

HEAD PHONE AMP

IC101 M5238P

HEAD PHONE P.C.Board

J801 HEAD PHONE

L-CH

R-CH

D-105U

Schematic Diagram<D-105U JA/EK>(1/2)

NOTE
1. All resistance values are in ohms. K=1,000 M=1,000,000
2. All capacitance values are in microfarads. P= 1 / 1,000,000

Voltage Measuring Conditions
1. Power Supply Voltage :AC100V,50/60Hz(JA moel only)
   AC120V/220V/240V,50Hz(EK modl only)
2. Measuring Meter :Digital Multimeter
3. Measuring Point Reference :Between Ground
4. Measuring Conditions :NO Signal Input
   AT Play Mode Test CD
   (Use the 2nd trak on the YED-18)

IC'S	IC501	IC105	IC102 IC101
TRANSISTORS (Q)	Q101	Q102	

IC201

1	-29.3V	33	5V
2	-22.6V	34	1.4V
3	-27V	35	4.9V
4	-27V	36	0V
5	-22.6V	37	4.8V
6	-32.8V	38	—
7	-32.8V	39	0V
8	-32.8V	40	0V
9	-32.8V	41	0V
10	-32.8V	42	0V
11	-32.8V	43	2.2V
12	-32.8V	44	-19V
13	-32.8V	45	-19.1V
14	-32.8V	46	-18.7V
15	-32.8V	47	0V
16	0V	48	2.3V
17	-7.6V	49	2.3V
18	4.8V	50	0V
19	-35.8V	51	4.9V
20	-7.4V	52	—
21	0V	53	5V
22	5V	54	0V
23	0.4V	55	0V
24	5V	56	0V
25	5V	57	-22.2V
26	1.4V	58	-24.2V
27	1.4V	59	-23.8V
28	4.9V	60	-17.1V
29	0V	61	-10.1V
30	4.8V	62	-15.6V
31	—	63	-22.5V
32	5V	64	-29.8V

IC204

1	—
2	—
3	-4.9V
4	-4.9V
5	-4.9V
6	-4.9V
7	-4.9V
8	-4.9V
9	-4.8V
10	-4.8V
11	-4.8V
12	0V
13	0V
14	0V
15	0V
16	4.9V

IC207

1	2.3V
2	2.4V
3	2.4V
4	2.4V
5	2.3V
6	2.4V
7	0V
8	2.4V
9	2.4V
10	2.4V
11	2.4V
12	2.4V
13	2.4V
14	4.9V

IC203

1	0V
2	1.1V
3	0V
4	2.5V
5	2.8V
6	-4.8V
7	0V
8	0V
9	0V
10	0V
11	0V
12	-0.6V
13	-0.4V
14	0V
15	-2.2V
16	-1.9V
17	-4.9V
18	0V
19	0V
20	0V
21	-4.8V
22	0V
23	-1.7V
24	-1.2V
25	0V
26	2.4V
27	2.4V
28	4.9V
29	0.2V
30	4.9V

IC206

1	2.5V
2	2.5V
3	2.4V
4	2.4V
5	2.4V
6	2.4V
7	2.4V
8	2.4V
9	1.9V
10	1.9V
11	1.9V
12	0V
13	1.9V
14	1.9V
15	1.9V
16	1.9V
17	2V
18	2.6V
19	*3
20	2.6V
21	4.3V
22	2V
23	2.8V
24	4.9V

*3 : 1.2~3.5V

IC208

1	4.2V
2	2.6V
3	—
4	—

IC205

1	0V	41	2.4V
2	-4.8V	42	2.4V
3	2.5V	43	2.4V
4	2.7V	44	2.5V
5	2.4V	45	2.5V
6	2.4V	46	2.8V
7	4.9V	47	2V
8	2.4V	48	*2
9	2.4V	49	4.3V
10	0V	50	2.6V
11	1.5V	51	—
12	0V	52	0V
13	4.9V	53	2.3V
14	5V	54	—
15	1.4V	55	0V
16	5V	56	0V
17	0V	57	4.9V
18	4.8V	58	0V
19	0V	59	0V
20	—	60	—
21	—	61	—
22	—	62	—
23	1.4V	63	—
24	0V	64	—
25	5V	65	—
26	4.9V	66	—
27	2.3V	67	—
28	4.9V	68	—
29	2V	69	—
30	1.9V	70	—
31	1.9V	71	—
32	1.9V	72	—
33	4.9V	73	4.9V
34	1.9V	74	—
35	1.9V	75	—
36	1.9V	76	2.3V
37	1.9V	77	—
38	2.4V	78	2.5V
39	2.4V	79	2.4V
40	2.4V	80	2.5V

*2 : 1.2~35V

IC202

1	-4.9V	25	-4.9V
2	-4.9V	26	0V
3	0V	27	—
4	0V	28	5V
5	0V	29	0V
6	0V	30	5V
7	0V	31	5V
8	0V	32	0V
9	0V	33	2.4V
10	0V	34	2.5V
11	1V	35	2.3V
12	0V	36	2.3V
13	0.3V	37	3.5V
14	0V	38	2.5V
15	0V	39	4.9V
16	4.9V	40	2.5V
17	0V	41	4.8V
18	-3.2V	42	2.5V
19	0V	43	4.9V
20	*1	44	0V
21	0V	45	1.1V
22	-4.9V	46	2.4V
23	-4V	47	0V
24	4.8V	48	0V

*1 : -0.7~0.9V

	IC105	IC214	IC215	IC216	IC217	IC221
1	15.7V	5.7V	-4.9V	7.9V	-7.8V	5V
2	0V	0V	-12.8V	0V	-12.8V	0V
3	11.9V	12V	0V	12V	0V	7.9V

	IC101	IC102	IC219	IC220	IC210
1	0V	0V	0V	0V	0V
2	0V	0V	0V	0V	0V
3	0V	0V	0V	0V	-8V
4	-7.8V	-7.8V	-7.8V	-7.8V	0V
5	0V	0V	0V	0V	—
6	0V	0V	0V	0V	—
7	0V	0V	0V	0V	—
8	7.9V	7.9V	7.9V	7.9V	12V

	IC213	IC218
1	0~4.9V	0~4.9V
2	-4.9~4.9V	-4.9~4.9V
3	-12.8V	-12.8V
4	-4.9~4.9V	-4.9~4.9V
5	12V	12V

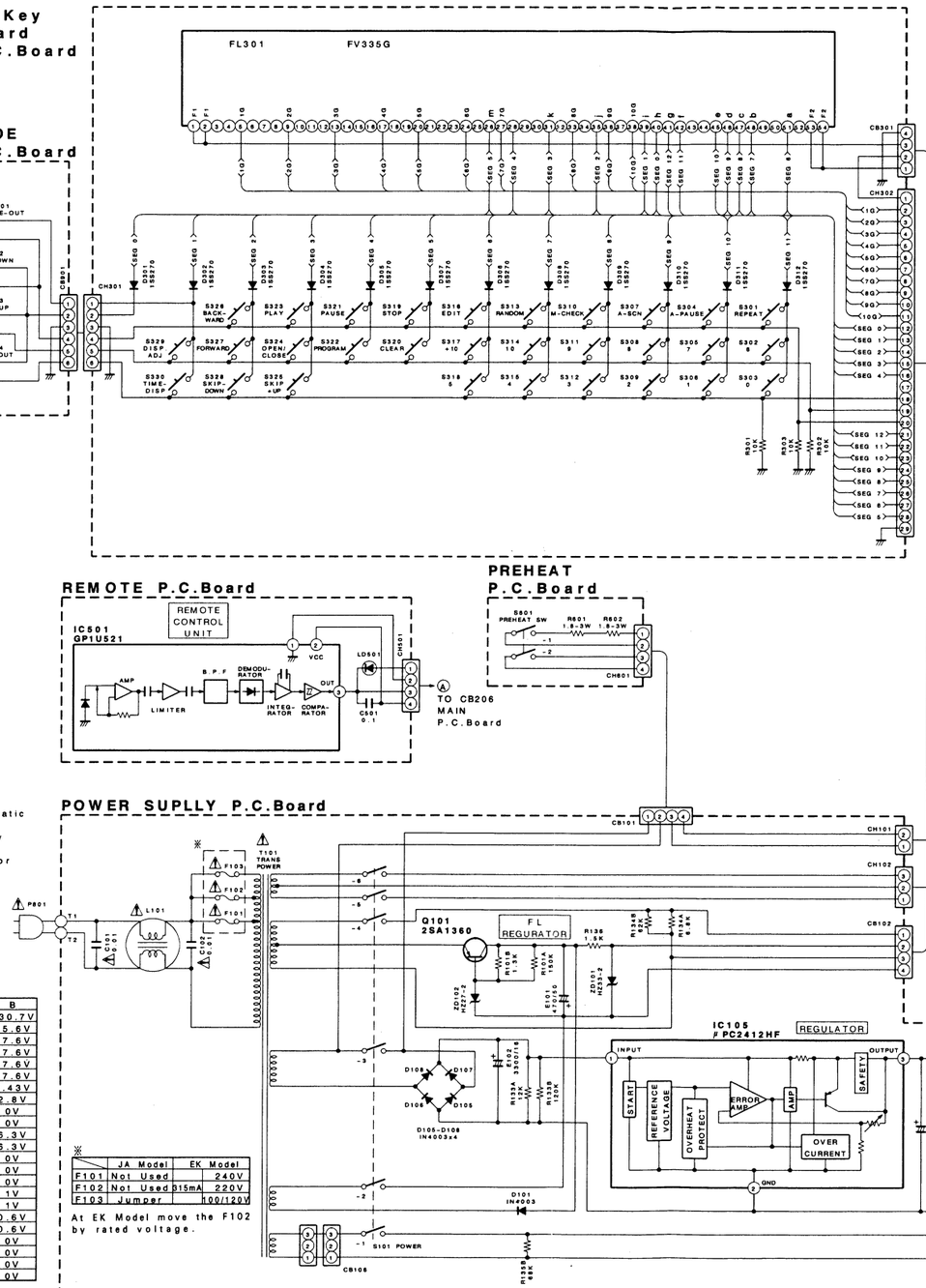
CAUTION:
The ⚠ mark,the symbol numbers in the schematic diagram designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

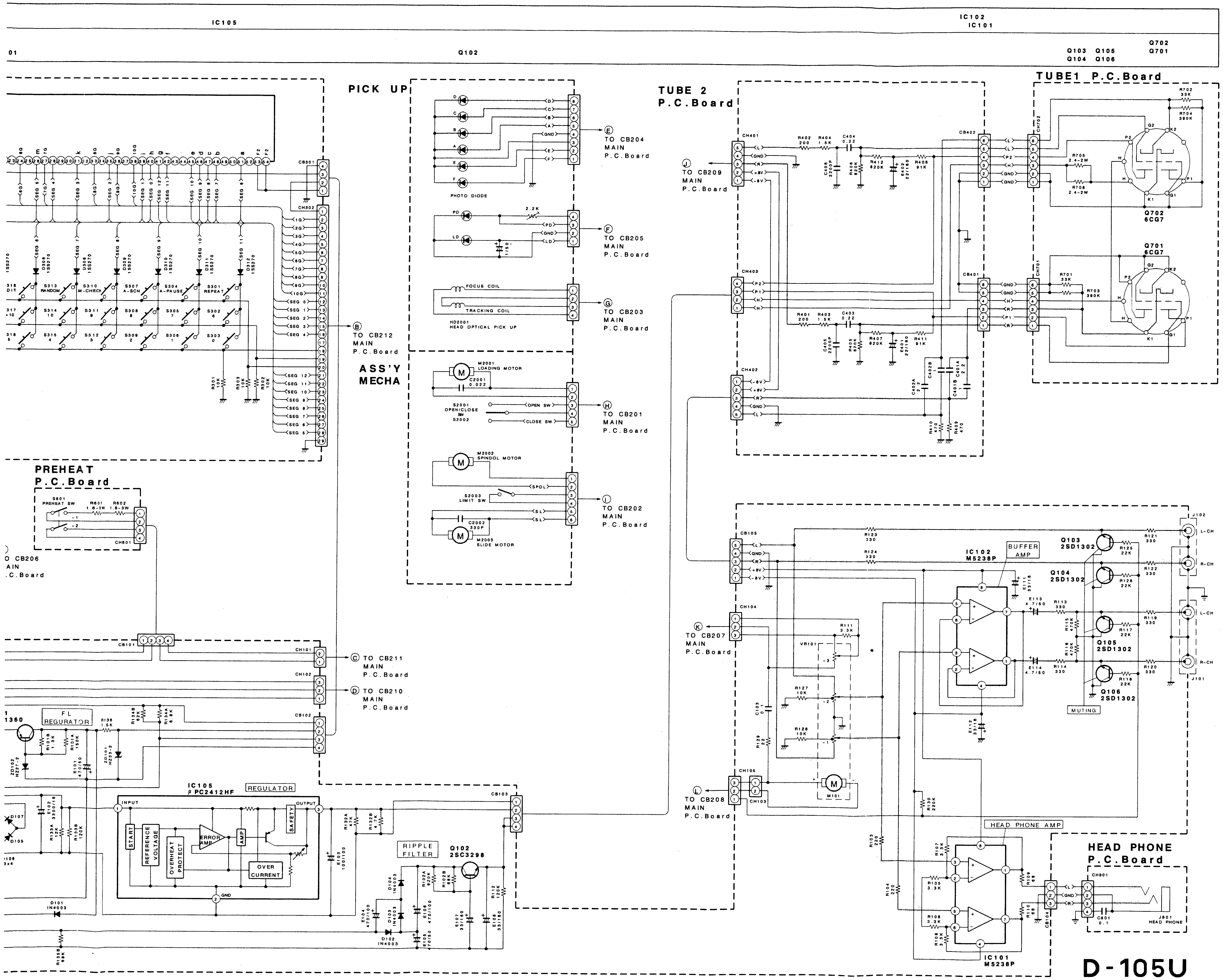
	IC209	IC211	IC212
1	2.5V	—	—
2	2.3V	—	—
3	4.9V	—	—
4	4.9V	—	—
5	—	—	—
6	2.6V	—	—
7	2.6V	—	—
8	0V	2.3V	2.3V
9	2V	5V	5V
10	4.9V	2V	2V
11	—	3.1V	3.1V
12	—	0V	0V
13	—	0V	0V
14	4.7V	0V	0V
15	4.9V	0V	0V
16	4.9V	-7.8V	-7.8V
17	4.9V	0V	0V
18	—	0V	0V
19	—	4.9V	4.9V
20	—	—	—
21	0V	—	—
22	4.9V	—	—
23	2.1V	3.4V	3.4V
24	2.1V	1.9V	1.9V
25	3.7V	3.7V	3.7V
26	1.9V	2V	2V
27	—	-7.8V	-7.8V
28	2.5V	—	—

	E	C	B
Q101	-30.2V	-43.8V	-30.7V
Q102	85.1V	130.5V	85.6V
Q103	0V	0V	-7.6V
Q104	0V	0V	-7.6V
Q105	0V	0V	-7.6V
Q106	0V	0V	-7.6V
Q201	2V	0V	2.43V
Q204	0V	0V	2.8V
Q205	11.7V	-7.5V	0V
Q206	4.9V	4.9V	0V
Q207	0V	0V	6.3V
Q208	0V	0V	6.3V
Q209	0V	0V	0V
Q210	0V	0V	0V
Q211	0V	0V	0V
Q212	0.6V	11.2V	1V
Q213	0.6V	-12V	1V
Q214	0V	11.2V	0.6V
Q215	0V	-12V	0.6V
Q216	0V	11.2V	0V
Q217	0V	-12V	0V
Q218	0.6V	11.2V	0V
Q219	0.6V	-12V	0V

	JA Model	EK Model
F101	Not Used	240V
F102	Not Used	315mA 220V
F103	Jumper	100/120V

At EK Model move the F102 by rated voltage.




IC105
IC102
IC101
Q102
Q103 Q105
Q104 Q106
Q702
Q701
PICK UP
PHOTO DIODE
HD2001 HEAD OPTICAL PICK UP
FOCUS COIL
TRACKING COIL
ASS'Y MECHA
M2001 LOADING MOTOR
M2002 SPINDOL MOTOR
M2003 SLIDE MOTOR
S2001 OPEN/CLOSE SW S2002
S2003 LIMIT SW
TO CB204 MAIN P.C.Board
TO CB205 MAIN P.C.Board
TO CB203 MAIN P.C.Board
TO CB201 MAIN P.C.Board
TO CB202 MAIN P.C.Board
TO CB212 MAIN P.C.Board
TO CB211 MAIN P.C.Board
TO CB210 MAIN P.C.Board
TO CB209 MAIN P.C.Board
TO CB207 MAIN P.C.Board
TO CB208 MAIN P.C.Board
TO CB206 MAIN P.C.Board
TUBE 2 P.C.Board
TUBE1 P.C.Board
Q702 6CG7
Q701 6CG7
PREHEAT P.C.Board
S601 PREHEAT SW
FL REGURATOR
IC105 μPC2412HF
REGULATOR
START
REFERENCE VOLTAGE
OVERHEAT PROTECT
ERROR AMP
AMP
SAFETY
OVER CURRENT
RIPPLE FILTER
Q102 2SC3298
IC102 M5238P
BUFFER AMP
Q103 2SD1302
Q104 2SD1302
Q105 2SD1302
Q106 2SD1302
MUTING
HEAD PHONE AMP
IC101 M5238P
HEAD PHONE P.C.Board
J801 HEAD PHONE
L-CH
R-CH
J101
J102
D-105U

Schematic Diagram <D-105U AD/UZ/AG/UQ> (2/2)

IC'S	IC213	IC203 IC204	IC214 IC215	IC202 IC216 IC217	IC201	IC208	IC207
TRANSISTORS (Q)	Q220		Q212 Q213		Q233 Q224	Q226 Q204 Q225	Q201

MAIN P.C.Board

IC203 CXA1081S

RF AMP

CURRENT REFERENCE

VOLTAGE REFERENCE

LEVEL SHIFT

FOK AMP

FOK COMPARATOR

FEM COMPARATOR

APC PD AMP

APC LD AMP

RF SUMMING AMP

AUTO ASYMMETRY CONTROL AMP

AUTO ASYMMETRY BUFFER

MIRROR AMP

PEAK HOLD

BOTTOM HOLD

MIRROR HOLD AMP

RF1-V AMP(1)

RF1 AMP(2)

MIRROR DIFFERENTIAL AMP

MIRROR COMPARATOR

P1-V AMP

DEFECT AMP

DEFECT BOTTOM HOLD

DEFECT COMPARATOR

E1-V AMP

TRACKING ERROR AMP

FOCUS ERROR AMP

CENTER VOLTAGE BUFFER

Q220 2SB1277

TO PICK UP

TO PICK UP

TO CH302 FL/KEY BOARD P.C.Board

TO CH501 REMOTE P.C.Board

TO CH101 POWER SUPLLY P.C.Board

TO ASS'Y MECH

TO ASS'Y MECH

TO PICK UP

TO CH102 POWER SUPLLY P.C.Board

IC213 LA6501

LOADING MOTOR DRIVER

CURRENT CONTROL

REGULATOR

IC214 NJM7805

IC216 NJM7808

IC215 NJM7905

IC217 NJM7907

REGULATOR

IC204 STA341M

Q212 2SC3421

Q213 2SA1358

FOCUS/TRACKING/SLED MOTOR DRIVER

IC202 CXA1082BS

SERVO SIGNAL PROCESSOR

TTL→I'L

CLVLPF

VCO

LOOP FILTER

V→I

3.5V REG

I'TTL

I'L DATA REGISTER SEQUENCER

INPUT SHIFT REGISTOR ADDRESS DECODER

OUTPUT DECODER

WINDOW COMPEN-SATION

SPF

FOCUS PHASE COMPEN-SATION

TRACKING PHASE COMPENSATION

IC201 15749W02

MICRO PROCESSOR

Q204 DTC114EL

GFS SW SWITCH

Q224 DTC144EL

Q225 DTC144EL

Q233 2SA950

FOCUS CIRCUIT

Q226 DTC124TL

EFM-PLL

CLV SERVO CONTROL

TRACKING COUNTER

IC208 HFBR1550

OPTICAL OUTPUT DRIVER

Q201 2SA854Q

IC207 MC74HCU04

DIGITAL OUTPUT DRIVER

J201

J202 DIGITAL-OUT

S201

IC207 IC206 IC205 IC209 IC211 IC212 IC221 IC218 IC219 IC220 IC210

Q201 Q210 Q209 Q206 Q207 Q208 Q221 Q222 Q211 Q205

DIGITAL SIGNAL PROCESSOR

IC205 CXD1125QZ

SUBCODE SYNC DETECTOR
SUBCODE DEMODULATOR
SUBCODE Q REGISTER
EFM-PLL
23-BIT SHIFT REGISTER
EFM DEMODULATOR
CLV SERVO CONTROL
FRAME SYNC DETECTOR/ PROTECTOR/ INSERTER
ERROR DETECTOR/ CORRECTOR
VCO CIRCUIT TIMING GENERATOR
INTER-POLATOR
X'TAL CIRCUIT TIMING GENERATOR
DIGITAL FILTER (CXD1130Q/ CXD1135Q)
SELECTOR
TRACKING COUNTER
CPU INTERFACE
RAM ADDRESS GENERATOR
DIGITAL OUT (CXD1125Q/ CXD1135Q)

IC211 PCM1701P
D/A CONVERTER
I'REF
V.REF
REF
REF AMP
SERVO AMP
R-2R NET WORK
MSB
LSB
CONSTANT CURRENT SEGMENT
18 Bit CURRENT SW
INPUT LOGIC INTERFACE TIMING

IC209 SM5813AP
DIGITAL FILTER
INPUT INTER FACE
FILTER OPERATION
OUTPUT INTERFACE
SYSTEM CLOCK
TIMING CONTROL

IC212 CPM1701P
D/A CONVERTER
(same internal blocks as IC211)

IC219 M5238L
IC220 M5238L
I-V CONVERTER
BUFFER AMP
CH1
CH2

Q221 2SD1302
Q222 2SD1302
MUTING

IC218 LA6501
VOLUME CIRCUIT
CURRENT CONTROL

Q211 2SC4038
Q205 DTA114EL
Q207 DTC114EL
RESET POWER ON MUTING

Q208 DTC114EL
IC210 NJM2903S
VCC
VEE

IC221 NJM78L05
REGULATOR
IN
OUT
GND

Q209 DTC114EL
Q206 DTA114EL
Q210 2SC4038
RESET POWER ON MUTING

IC206 LC3516AS
16KS-RAM
ADDRESS BUFFER
INPUT DATA BUFFER
INPUT DATA CON-TROLER
COLUMN DECODER SENS AMP
OUTPUT DATA BUFFER
DECODER
MEMORY CELL ALLEY 128x128

OPTICAL OUTPUT D.RIVER
Q201 2SA854Q
IC207 MC74HCU04
DIGITAL OUTPUT DRIVER

CB209
CB213
CB208
CB207

(J) TO CH401 TUBE2 P.C.Board
(M) TO CB107 POWER SUPLLY P.C.Board
(L) TO CH105 POWER SUPLLY P.C.Board
(K) TO CH104 POWER SUPLLY P.C.Board

NOTE: ■ :For West German model only(AD)
□ :For England model only(AG)
♦ :For American model only(UZ)
◇ :For Canadian model only(UQ)
Others:Common

D-105U

Schematic Diagram <D-105U JA/EK> (2/2)

IC'S	IC213	IC203	IC214 IC215	IC202 IC216 IC217	IC201	IC204	IC208	IC207	IC206
TRANSISTORS (Q)	Q220	Q218 Q219	Q216 Q217	Q214 Q215	Q212 Q213	Q204		Q201	

MAIN P.C.Board

IC203 CXA1081S

IC202 CXA1082BS SERVO SIGNAL PROCESSOR

IC204 MC14053

IC206 LC3516AS

IC207 MC74HCU04

IC208 HFBR1550

IC213 LA6501

IC214 NJM7805

IC215 NJM7905

IC216 NJM7808

IC217 NJM7908

IC201 15365W02 MICRO PROCESSOR

Q220 2SB1277

Q204 DTC114EL

Q201 2SA854Q

Q218 2SC3421 FOCUS DRIVER

Q219 2SA1358

Q216 2SC3421 TRACKING DRIVER

Q217 2SA1358

Q214 2SC3421 SLED MOTOR DRIVER

Q215 2SA1358

Q212 2SC3421 SPINDLE MOTOR DRIVER

Q213 2SA1358

TO PICK UP (F)

TO PICK UP (E)

TO CH302 FL/KEY BOARD P.C.Board (B)

TO CH501 REMOTE P.C.Board (A)

TO CH101 POWER SUPLLY P.C.Board (C)

TO ASS'Y MECH (H)

TO ASS'Y MECH (J)

TO PICK UP (G)

TO CH102 POWER SUPLLY P.C.Board (D)

RF AMP

CURRENT REFERENCE

VOLTAGE REFERENCE

LEVEL SHIFT

FOK AMP

FOK COMPARATOR

EFM COMPARATOR

APC I/O AMP

APC PD AMP

RF SUMMING AMP

AUTO ASYMMETRY CONTROL AMP

AUTO ASYMMETRY BUFFER

MIRROR AMP

PEAK HOLD

BOTTOM HOLD

MIRROR HOLD AMP

MIRROR DIFFERENTIAL AMP

MIRROR COMPARATOR

DEFECT AMP

DEFECT BOTTOM HOLD

DEFECT COMPARATOR

TRACKING ERROR AMP

FOCUS ERROR AMP

I-V AMP

E-I-V AMP

CENTER VOLTAGE BUFFER

I.C. BAL

F. BIAS

F. GAIN

T. GAIN

CLVLPF

VCO

LOOP FILTER

V

3.5V REG

TTL→I'L

I'L→TTL

I'L DATA REGISTER SEQUENCER OUTPUT DECODER

INPUT SHIFT RESISTOR ADDRESS DECODER

WINDOW COMPENSATION

SPF

FOCUS PHASE COMPENSATION

TRACKING PHASE COMPENSATION

DEFECT MUTING SWITCH

LEVEL CONVERTER

BINARY TO 1 of 2 DECODER WITH INH BIT

GFS BW SWITCH

SUBCODE SYNC DETECTOR

EFM-PLL

23-BIT SHIFT REGISTER

CLV SERVO CONTROL

FRAME SYNC DETECTOR/ PROTECTOR/ INSERTER

VCO CIRCUIT TIMING GENERATOR

X'TAL CIRCUIT TIMING GENERATOR

TRACKING COUNTER

CPU INTERFACE

OPTICAL OUTPUT DRIVER

DIGITAL OUTPUT DRIVER

ADDRESS BUFFER

LOADING MOTOR DRIVER

REGULATOR

REGULATOR

CURRENT CONTROL

FOCUS DRIVER

TRACKING DRIVER

SLED MOTOR DRIVER

SPINDLE MOTOR DRIVER

D201-D204 IN4003X4

270K x15

270K x8

X201 16.9344MHz

J201 OUT-2 IN-1

J202 DIGITAL-OUT

S201

D212 1SS270

D211,D217-D220 1SS270*5

IC207 IC206 IC205 IC209 IC211 IC212 IC221 IC218 IC219 IC220 IC210

Q201 Q210 Q209 Q206 Q207 Q208 Q211 Q221 Q222 Q205

DIGITAL SIGNAL PROCESSOR

IC205 CXD1125QZ

SUBCODE SYNC DETECTOR
SUBCODE DEMODULATOR
SUBCODE Q REGISTER
EFM-PLL
23-BIT SHIFT REGISTER
EFM DEMODULATOR
CLV SERVO CONTROL
FRAME SYNC DETECTOR/ PROTECTOR/ INSERTER
ERROR DETECTOR/ CORRECTOR
VCO CIRCUIT TIMING GENERATOR
INTER-POLATOR
X'TAL CIRCUIT TIMING GENERATOR
DIGITAL FILTER (CXD1130Q/CXD1135Q)
SELECTOR
TRACKING COUNTER
CPU INTERFACE
RAM ADDRESS GENERATOR
DIGITAL OUT (CXD1125Q/CXD1135Q)

IC211 PCM1701P D/A CONVERTER
I-REF, V-REF, REF, REF AMP, R-2R NET WORK, MSB, LSB, CONSTANT CURRENT SEGMENT, 18 Bit CURRENT SW, SERVO AMP, INPUT LOGIC INTERFACE TIMING

IC209 SM5813AP DIGITAL FILTER
INPUT INTER FACE, FILTER OPERATION, OUTPUT INTERFACE, SYSTEM CLOCK, TIMING CONTROL

IC212 CPM1701P D/A CONVERTER
(same internal blocks as IC211)

I-V CONVERTER / BUFFER AMP

IC219 M5238L

IC220 M5238L

Q221 2SD1302 MUTING

Q222 2SD1302 MUTING

IC218 LA6501 VOLUME CIRCUIT
CURRENT CONTROL

Q211 2SC4038

Q205 DTA114EL

Q207 DTC114EL

RESET POWER ON MUTING

Q208 DTC114EL

IC210 NJM2903D VOLUME CIRCUIT

CB208 → TO CH401 TUBE2 P.C.Board

CB206 → TO CH105 POWER SUPLLY P.C.Board

CB207 → TO CH104 POWER SUPLLY P.C.Board

IC206 LC3516AS 16KS-RAM
ADDRESS BUFFER, INPUT DATA BUFFER, INPUT DATA CONTROLER, COLUMN DECODER SENS AMP, OUTPUT DATA BUFFER, ADDRESS BUFFER, DECODER, MEMORY CELL ALLEY 128x128

OPTICAL OUTPUT DRIVER
Q201 2SA854Q

IC207 MC74HCU04

DIGITAL OUTPUT DRIVER

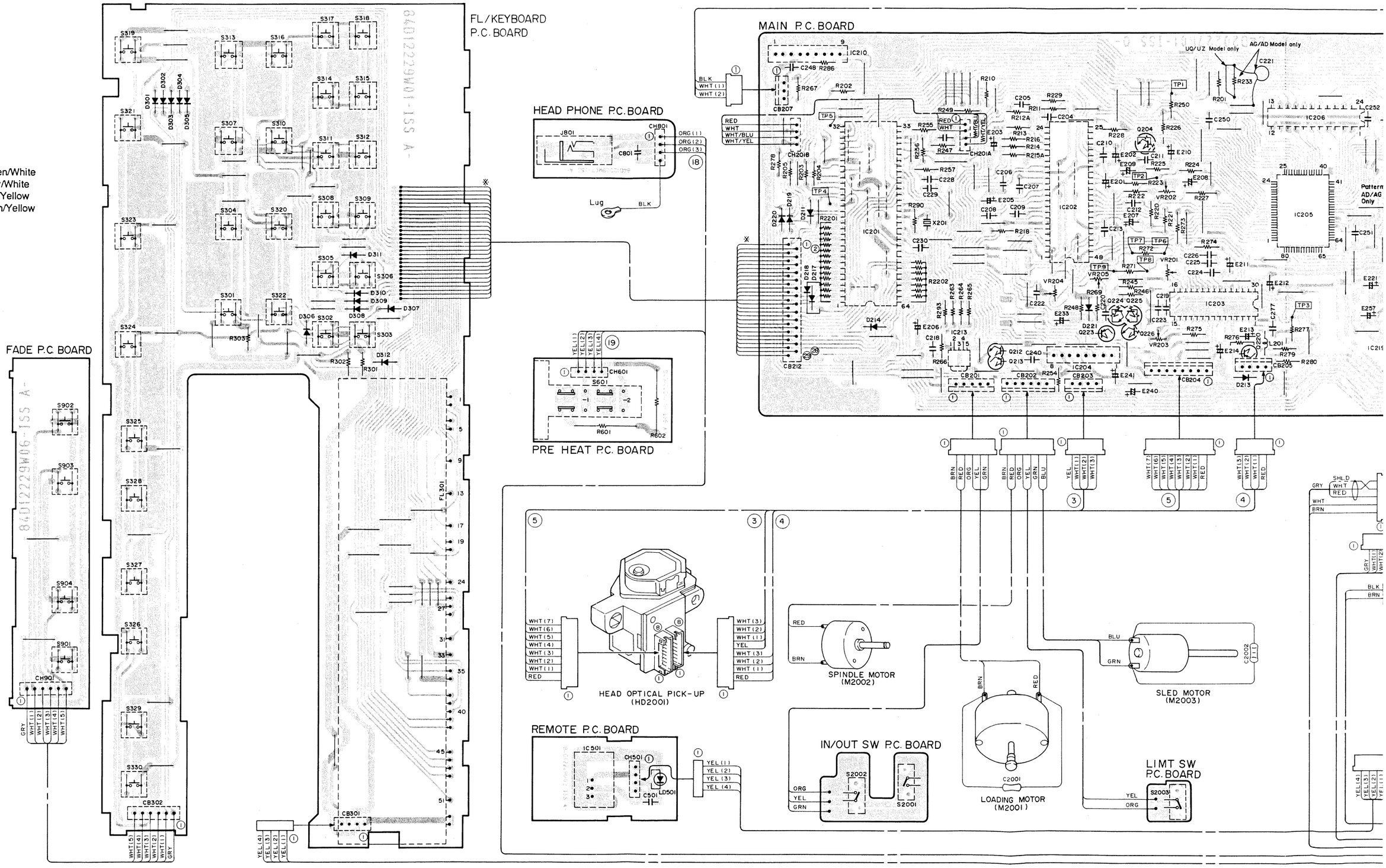
REGULATOR
IC221 NJM78L05
Q210 2SC4038
Q209 DTC114EL
Q206 DTA114EL
RESET POWER ON MUTING

D206 MA150
D209 MA150

D-105U

Parts Layout on P.C. Boards and Wiring Diagram (AD/UZ/AG/UQ model)

BLU.....Blue
GRN.....Green
BLK.....Black
GRY.....Gray
WHT.....White
RED.....Red
BRN.....Brown
ORG.....Orange
YEL.....Yellow
VIO.....Violet
PNK.....Pink
GRN/WHT.....Green/White
GRY/WHT.....Gray/White
GRY/YEL.....Gray/Yellow
GRN/TEL.....Green/Yellow
SHLD....Shield



POWER SUPPLY P.C.BOARD

TUBE P.C.BOARD-(2)

TUBE P.C. BOARD-(1)

VOLUME (VR101,M101) CONTROL

POWER TRANS (T101)

LED MOTOR (M2003)

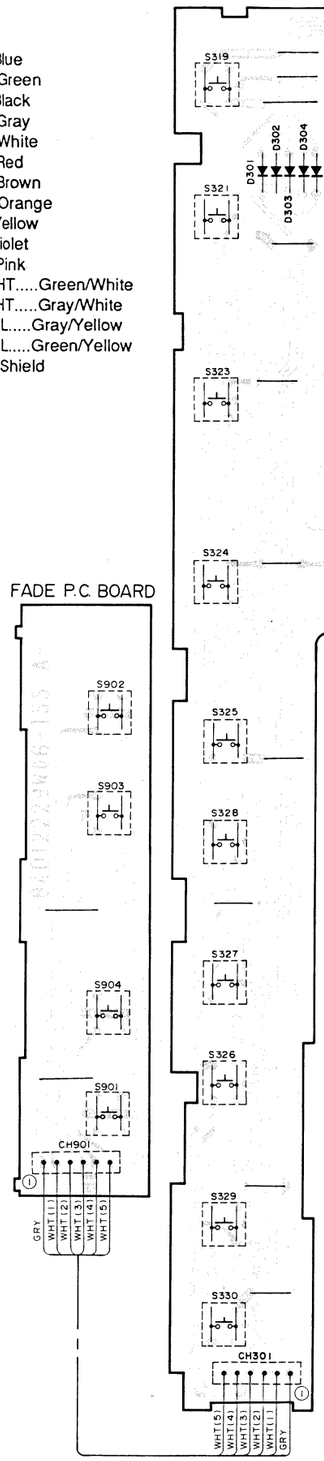
PLUG AC CORD (P801) (AD Model only)

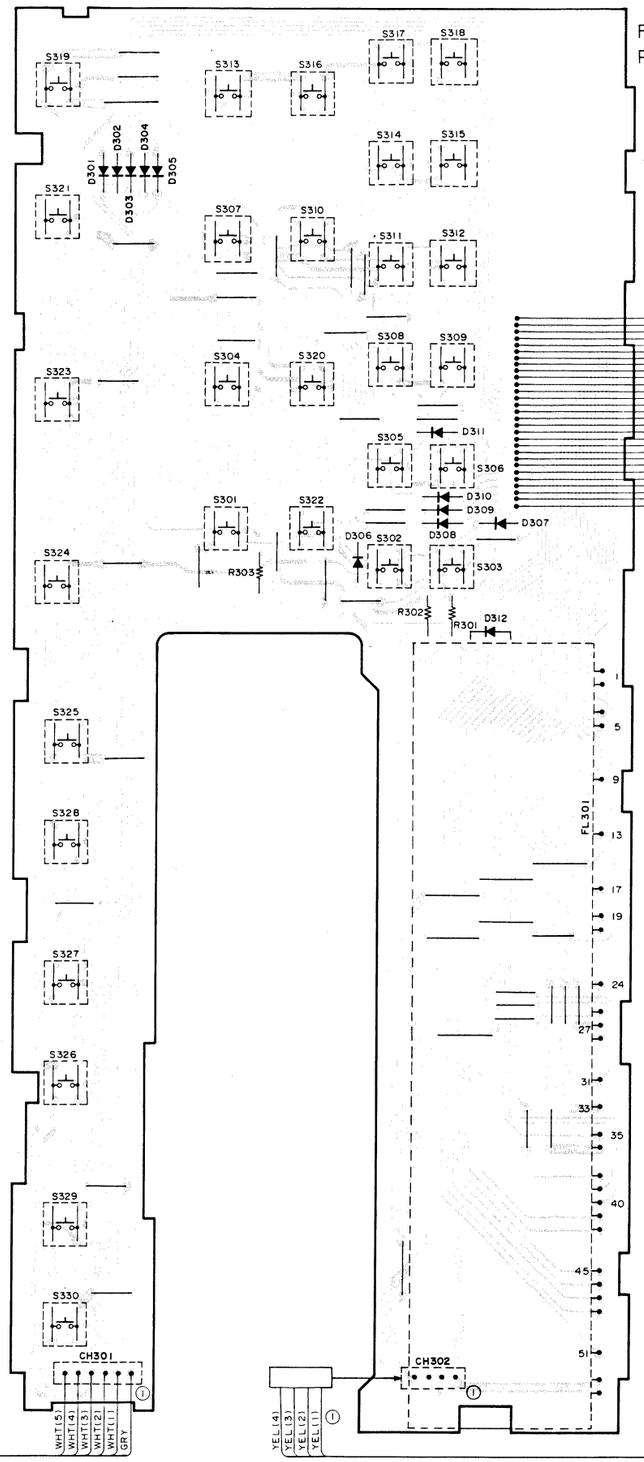
PLUG AC CORD (P801) (UZ/UQ Model only)

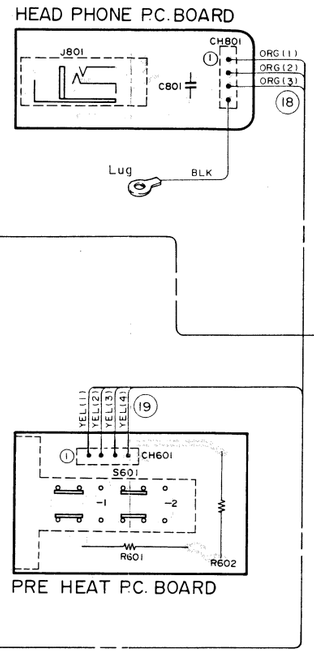
PLUG AC CORD(P801) (AG Model only)

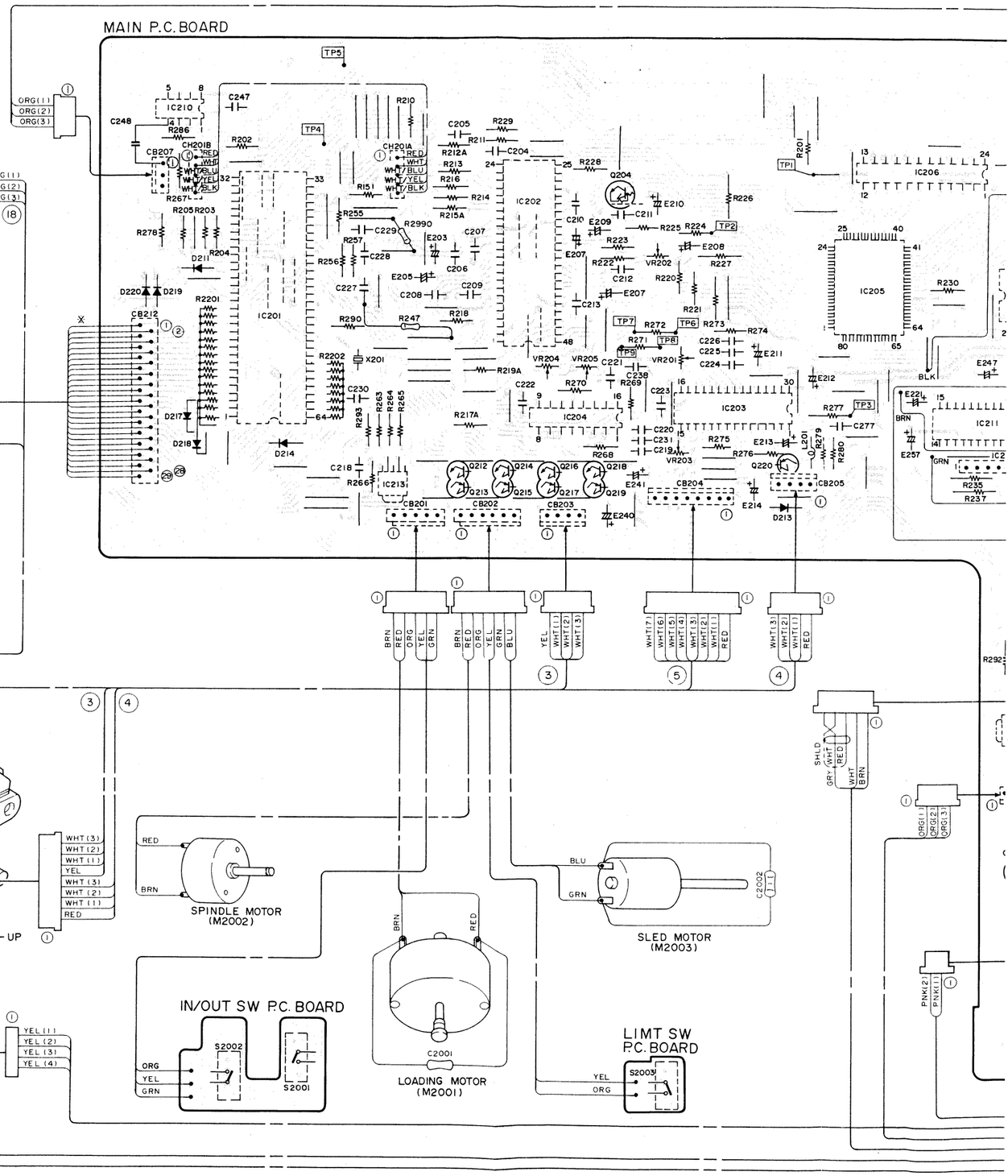
Parts Layout on P.C. Board and Wiring Diagram (JA/EK model)

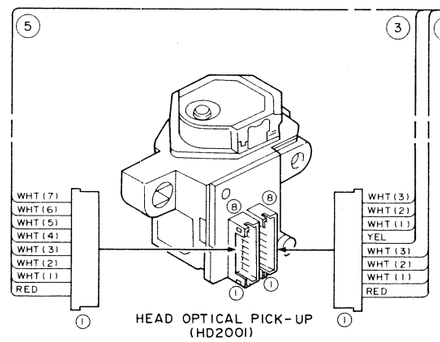
BLU.....Blue
GRN.....Green
BLK.....Black
GRY.....Gray
WHT.....White
RED.....Red
BRN.....Brown
ORG.....Orange
YEL.....Yellow
VIO.....Violet
PNK.....Pink
GRN/WHT.....Green/White
GRY/WHT.....Gray/White
GRY/YEL.....Gray/Yellow
GRN/TEL.....Green/Yellow
SHLD....Shield

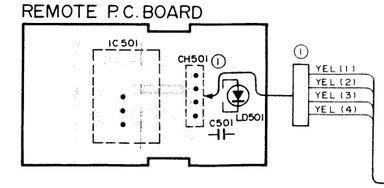







MAIN P.C. BOARD
TP5 TP4 TP1 TP2 TP3 TP6 TP7 TP8
IC201 IC202 IC203 IC204 IC205 IC206 IC210 IC211 IC213
X201
Q204 Q212 Q213 Q214 Q215 Q216 Q217 Q218 Q219 Q220
CB201 CB202 CB203 CB204 CB205
CH201A CH201B
ORG(1) ORG(2) ORG(3)
BRN RED ORG YEL GRN
BRN RED ORG YEL GRN BLU
YEL WHT(1) WHT(2) WHT(3)
WHT(7) WHT(6) WHT(5) WHT(4) WHT(3) WHT(2) WHT(1) RED
WHT(3) WHT(2) WHT(1) YEL
SHLD GRY WHT RED BRN
GRY(1) GRY(2) GRY(3)
PNK(2) PNK(1)
3 4 5





POWER SUPPLY P.C.BOARD

EK Model only

JA Model only

PLUG AC CORD (P801)
(EK Model only)

PLUG AC CORD (P801)
(JA Model only)

TUBE P.C.BOARD-(2)

TUBE P.C. BOARD-(1)

VOLUME (VR101,M101)
CONTROL

POWER TRANS
(T101)

Electrical Parts List

Resistor: Carbon resistors under 1/8 watts are not mentioned in the parts list, please confirm them by schematic diagram.
Capacitor: μF-microfarads. pF-picofarads.

Abbreviations

Cap.-Capacitor	CER.-Ceramic
CP.-Chip	ELY.-Electrolytic
LED.-Light Emitting Diode	MIC.-Mica
MO.-Metal Oxide Film	MYL.-Mylar
PP.-Polypropylene	SOL.-Solid
TAN.-Tantalum	ZEN.-Zenner

	Symbol No.	Part No.	Description
	Main P.C. Board		
	IC's		
●	IC201	51T15365W02	15365W02
▲	IC201	51T15365W02	15365W02
◆	IC201	51T15749W02	15749W02
◇	IC201	51T15749W02	15749W02
■	IC201	51T15749W02	15749W02
□	IC201	51T15749W02	15749W02
	IC202	51T84722F02	CXA1082BS
	IC203	51T84721F01	CXA1081S
●	IC204	51T94886F01	MC14053
▲	IC204	51T94886F01	MC14053
◆	IC204	51T25098W01	STA341M
◇	IC204	51T25098W01	STA341M
■	IC204	51T25098W01	STA341M
□	IC204	51T25098W01	STA341M
	IC205	51T84720F01	CXD1125QZ
	or	51T84719F01	CXD1135QZ
	IC206	51T84723F01	LC3516AS
	IC207	51T94890F01	MC74HCU04
	IC208	51T15608W01	HFBR1550
	IC209	51T15628W01	SM5813AP
●	IC210	51T64227F01	NJM2903D
▲	IC210	51T64227F01	NJM2903D
◆	IC210	51T62866F01	NJM2903S
◇	IC210	51T62866F01	NJM2903S
■	IC210	51T62866F01	NJM2903S
□	IC210	51T62866F01	NJM2903S
	IC211	51T16104W01	PCM1701P
	IC212	51T16104W01	PCM1701P
	IC213	51T90889F01	LA6501
	IC214	51T80338F01	NJM7805
	IC215	51T80339F01	NJM7905

	Symbol No.	Part No.	Description
●	IC216	51T15976W01	NJM7808
▲	IC216	51T15976W01	NJM7808
◆	IC216	51T15121W02	NJM7808FA
◇	IC216	51T15121W02	NJM7808FA
■	IC216	51T15121W02	NJM7808FA
□	IC216	51T15121W02	NJM7808FA
	IC217	51T15977W01	NJM7908
	IC218	51T90889F01	LA6501
	IC219	51T80136F02	M5238L
	IC220	51T80136F02	M5238L
	IC221	51T60969F01	NJM78L05-A
	Transistors		
	Q201	48T73682F01	2SA854Q
	Q204	48T82763F02	DTC114EL
	Q205	48T82762F02	DTA114EL
	Q206	48T82762F02	DTA114EL
	Q207	48T82763F02	DTC114EL
	Q208	48T82763F02	DTC114EL
	Q209	48T82763F02	DTC114EL
	Q210	48T82758F01	2SC4038
	Q211	48T82758F01	2SC4038
	Q212	48T69176F01	2SC3421
	Q213	48T69177F01	2SA1358
●	Q214	48T69176F01	2SC3421
▲	Q214	48T69176F01	2SC3421
●	Q215	48T69177F01	2SA1358
▲	Q215	48T69177F01	2SA1358
●	Q216	48T69176F01	2SC3421
▲	Q216	48T69176F01	2SC3421
●	Q217	48T69177F01	2SA1358
▲	Q217	48T69177F01	2SA1358
●	Q218	48T69176F01	2SC3421
▲	Q218	48T69176F01	2SC3421
●	Q219	48T69177F01	2SA1358
▲	Q219	48T69177F01	2SA1358
	Q220	48T82759F01	2SB1277
	Q221	48T57305F04	2SD1302
	Q222	48T57305F04	2SD1302
◆	Q223	48T43526F02	2SA950
◇	Q223	48T43526F02	2SA950
■	Q223	48T43526F02	2SA950
□	Q223	48T43526F02	2SA950
◆	Q224	48T82763F04	DTC114EL
◇	Q224	48T82763F04	DTC114EL

Note: ●: For Japanese model only (JA)
▲: For General Foreigb model only (EK)
others: Common

◆: For American model only (UZ)
■: For West germany model only (AD)
◇: For Canadian model only (UQ)
□: For England modell only (AG)

	Symbol No	Part No	Description		
■	Q224	48T82763F04	DTC114EL		
□	Q224	48T82763F04	DTC114EL		
◆	Q225	48T82763F04	DTC114EL		
◇	Q225	48T82763F04	DTC114EL		
■	Q225	48T82763F04	DTC114EL		
□	Q225	48T82763F04	DTC114EL		
◆	Q226	48T82763F11	DTC124TL		
◇	Q226	48T82763F11	DTC124TL		
■	Q226	48T82763F11	DTC124TL		
□	Q226	48T82763F11	DTC124TL		
	Diodes				
	D201	48S40477U01	1N4003		
	D202	48S40477U01	1N4003		
	D203	48S40477U01	1N4003		
	D204	48S40477U01	1N4003		
	D205	48T84758F01	1SS270ATD		
	D206	48S40477U01	1N4003		
	D207	48S40477U01	1N4003		
●	D208	48T51582F01	MA150		
▲	D208	48T51582F01	MA150		
◆	D208	48T84758F01	1SS270		
◇	D208	48T84758F01	1SS270		
■	D208	48T84758F01	1SS270		
□	D208	48T84758F01	1SS270		
●	D209	48T51582F01	MA150		
▲	D209	48T51582F01	MA150		
◆	D209	48T84758F01	1SS270		
◇	D209	48T84758F01	1SS270		
■	D209	48T84758F01	1SS270		
□	D209	48T84758F01	1SS270		
	D210	48T84758F01	1SS270		
	D211	48T84758F01	1SS270		
	D212	48T84758F01	1SS270		
	D213	48T84758F01	1SS270		
	D214	48T84758F01	1SS270		
	D215	48T84758F01	1SS270		
	D217	48T84758F01	1SS270		
	D218	48T84758F01	1SS270		
	D219	48T84758F01	1SS270		
	D220	48T84758F01	1SS270		
◆	D221	48T84758F01	1SS270		
◇	D221	48T84758F01	1SS270		
■	D221	48T84758F01	1SS270		
□	D221	48T84758F01	1SS270		

	Symbol No	Part No	Description		
	Capacitors				
	C201	08T57298F01	CER.	0.1μF	
	E201	23T00180L08	ELY.	33μF/16V	
	C202	08T94422F01	CER.	0.47μF	
◆	E202	23T00180L08	ELY	33μF/16V	
◇	E202	23T00180L08	ELY	33μF/16V	
■	E202	23T00180L08	ELY	33μF/16V	
□	E202	23T00180L08	ELY	33μF/16V	
◆	C203	08S55260F13	CER.	10pF	
◇	C203	08S55260F13	CER.	10pF	
■	C203	08S55260F13	CER.	10pF	
□	C203	08S55260F13	CER.	10pF	
●	C203	08S65480F13	CER.	10μF	
▲	C203	08S65480F13	CER.	10μF	
	E203	23T00180L25	ELY.	10μF/50V	
	C204	08T57705F67	MYL.	0.01 μF	
	C205	08T57705F69	MYL.	0.015 μF	
	E205	23T00180L25	MYL.	10μF/50V	
	C206	08T57851F11	TF.	0.068 μF	
◆	E206	23T00180L08	ELY,	33μF/16V	
◇	E206	23T00180L08	ELY,	33μF/16V	
■	E206	23T00180L08	ELY,	33μF/16V	
□	E206	23T00180L08	ELY,	33μF/16V	
	C207	08T57851F13	TF.	0.1 μF	
	E207	23T00180L20	ELY.	0.47μF/50V	
	C208	08T57705F73	MYL.	0.033μF	
	E208	23T00180L13	ELY.	47μF/25V	
	C209	08T57851F13	TF.	0.1 μF	
	E209	23T00180L24	ELY.	4.7μF/50V	
	C210	08T57851F13	TF.	0.1 μF	
	E210	23T00180L21	ELY.	1μF/50V	
	C211	08T57705F63	MYL.	4700pF	
	E211	23T00180L20	ELY.	0.47μF/50V	
	C212	08T57705F55	MYL.	1000pF	
	E212	23T00180L26	ELY.	22μF/50V	
	C213	08T57705F67	MYL.	0.01μF	
	E213	23T00180L14	ELY.	100μF/25V	
	C214	08T55260F13	CER.	10pF	
	E214	23T00180L26	ELY.	22μF/50V	
	C215	08T55260F13	CER.	10pF	
	E215	23T00180L08	ELY.	33μF/16V	
	C216	08T94422F01	CER.	0.47μF	
	C217	08T94422F01	CER.	0.47μF	
	C218	08T57851F13	TF.	0.1μF	
●	C219	08T57851F21	TF.	0.47μF	
▲	C219	08T57851F21	TF.	0.47μF	

Note: ●: For Japanese model only (JA)
▲: For General Foreigb model only (EK)
others: Common

◆: For American model only (UZ)
■: For West Germany model only (AD)
◇: For Canadian model only (UQ),
□: For England model only (AG),

Symbol No.		Part No.	Description			
◆	C219	08T94422F01	CER.	0.47 μF		
◇	C219	08T94422F01	CER.	0.47 μF		
■	C219	08T94422F01	CER.	0.47 μF		
□	C219	08T94422F01	CER.	0.47 μF		
	E219	23T00180L08	ELY.	33 μF/16V		
	C220	08T57705F59	MYL.	2200pF		
●	C221	08T57851F21	TF.	0.47 μF		
▲	C221	08T57851F21	TF.	0.47 μF		
■	C221	21C45322G16	CER.	33pF		
□	E221	23T00180L08	ELY.	33 μF/16V		
	C222	08T57705F63	MYL.	4700pF		
	E222	23T00180L08	ELY.	33 μF/16V		
	C223	08T57705F73	MYL.	0.033 μF		
	C224	08T57705F67	MYL,.	0.01 μF		
	C225	08T57705F67	MYL.	0.01 μF		
	E225	23T74513F06	ELY.	18mF/5.5V		
	C226	08T57705F67	MYL.	0.01 μF		
●	E226	23T00180L16	ELY.	330 μF/25V		
▲	E226	23T00180L16	ELY.	330 μF/25V		
◆	E226	23T00134L46	ELY,	1000 μF/25V		
◇	E226	23T00134L46	ELY,	1000 μF/25V		
■	E226	23T00134L46	ELY,	1000 μF/25V		
□	E226	23T00134L46	ELY,	1000 μF/25V		
	C227	08T57705F73	MYL.	0.033 μF		
	E227	23T00180L25	ELY.	10 μF/50V		
	C228	08T57705F69	MYL.	0.015 μF		
	E228	23T00180L24	ELY.	4.7 μF/50V		
	C229	08T57705F65	MYL.	6800pF		
	E229	23T00180L21	ELY.	1 μF/50V		
	C230	08T94422F01	CER.	0.47 μF		
●	C231	08T57298F01	CER.	0.1 μF		
▲	C231	08T57298F01	CER.	0.1 μF		
■	C231	21C45322G18	CER.	47pF		
□	C231	21C45322G18	CER.	47pF		
	E231	23T00133L12	ELY.	4700 μF/16V		
	C232	08T57298F01	CER.	0.1 μF		
	E232	23T00133L12	ELY.	4700 μF/16V		
	C233	08T94422F01	CER.	0.47 μF		
	C234	08T57298F01	CER.	0.1 μF		
◆	E233	23T00180L21	ELY.	10 μF/50V		
◇	E233	23T00180L21	ELY.	10 μF/50V		
■	E233	23T00180L21	ELY.	10 μF/50V		
□	E233	23T00180L21	ELY.	10 μF/50V		
	C235	08T57298F01	CER.	0.1 μF		
	E235	23T00180L14	ELY.	100 μF/25V		
■	C236	08S40805F07	CER.	1000pF		
■	C236	08S40805F07	CER.	1000pF		

Note: ●:For Japanese model only (JA)
▲:For General Foreign model only (EK)
others:Common

Symbol No.		Part No.	Description			
	E236	23T00180L14	ELY.	100 μF/25V		
	C237	08T57298F01	CER.	0.1 μF		
●	E237	23T00180L16	ELY.	330 μF/25V		
▲	E237	23T00180L16	ELY.	330 μF/25V		
◆	E237	23T00181L29	ELY.	330 μF/25V		
◇	E237	23T00181L29	ELY.	330 μF/25V		
■	E237	23T00181L29	ELY.	330 μF/25V		
□	E237	23T00181L29	ELY.	330 μF/25V		
■	C238	21C45322G32	CER.	0.022 μF		
□	C238	21C45322G32	CER.	0.022 μF		
●	C238	08T57298F01	CER.	0.1 μF		
▲	C238	08T57298F01	CER.	0.1 μF		
●	E238	23T00180L16	ELY.	330 μF/25V		
▲	E238	23T00180L16	ELY.	330 μF/25V		
◆	E238	23T00181L29	ELY.	330 μF/25V		
◇	E238	23T00181L29	ELY.	330 μF/25V		
■	E238	23T00181L29	ELY.	330 μF/25V		
□	E238	23T00181L29	ELY.	330 μF/25V		
	C239	08T94422F01	CER.	0.47 μF		
◆	C240	08T57851F13	TF.	0.1 μF		
◇	C240	08T57851F13	TF.	0.1 μF		
■	C240	08T57851F13	TF.	0.1 μF		
□	C240	08T57851F13	TF.	0.1 μF		
	E240	23T00180L08	ELY.	33 μF/16V		
	C241	08T00151L25	P.P	0.01 μF		
	E241	23T00180L08	ELY.	33 μF/16V		
	C242	08T00151L25	P.P	0.01 μF		
	C243	08T94422F01	CER.	0.47 μF		
	C244	08T94422F01	CER.	0.47 μF		
	E245	23T00180L08	ELY.	33 μF/16V		
	E246	23T00180L08	ELY.	33 μF/16V		
	C247	08T57298F01	CER.	0.1 μF		
	E247	23T00180L23	ELY.	3.3 μF/50V		
	C248	08T57298F01	CER.	0.1 μF		
	E248	23T00180L23	ELY.	3.3 μF/50V		
	E249	23T00180L25	ELY.	10 μF/50V		
◆	C250	08T94422F01	CER.	0.47 μF		
◇	C250	08T94422F01	CER.	0.47 μF		
■	C250	08T94422F01	CER.	0.47 μF		
□	C250	08T94422F01	CER.	0.47 μF		
	E250	23T00180L25	ELY.	10 μF/50V		
◆	C251	08T94422F01	CER.	0.47 μF		
◇	C251	08T94422F01	CER.	0.47 μF		
■	C251	08T94422F01	CER.	0.47 μF		
□	C251	08T94422F01	CER.	0.47 μF		

◆:For American model only (UZ)
■:For West Germany model only (AD)
◇:For Canadian model only (UQ),
□:For England model only (AG),

Symbol No	Part No	Description		
	E251	23T00180L24	ELY. 4.7μF/50V	
◆	C252	08T94422F01	CER. 0.47μF	
◇	C252	08T94422F01	CER. 0.47μF	
■	C252	08T94422F01	CER. 0.47μF	
□	C252	08T94422F01	CER. 0.47μF	
	E252	23T00180L24	ELY. 4.7μF/50V	
	E253	23T00180L23	ELY. 3.3μF/50V	
	E254	23T00180L23	ELY. 3.3μF/50V	
	E257	23T00180L24	ELY. 4.7μF/50V	
	E258	23T00180L24	ELY. 4.7μF/50V	
	E259	23T00180L26	ELY. 22μF/50V	
	E260	23T00180L26	ELY. 22μF/50V	
	E261	23T00180L26	ELY. 22μF/50V	
	E262	23T00180L26	ELY. 22μF/50V	
	C277	08T57705F59	MYL. 2200pF	
■	C2290	08T44979P10	CER. 0.022μF	
□	C2290	08T44979P10	CER. 0.022μF	
	Jacks			
	J201, S201	09T84124F01	HEADPHONE	
	J202	09T15627W01	PLATE.PHIP	
	Coil			
●	L201	24T50508F22	Inductor,10μH	
▲	L201	24T50508F22	Inductor,10μH	
◆	L201	24T70381F21	Inductor,10μH	
◇	L201	24T70381F21	Inductor,10μH	
■	L201	24T70381F21	Inductor,10μH	
□	L201	24T70381F21	Inductor,10μH	
	Resistars			
	R2201	06T74182F09	Block 270K ohm×15	
	R2202	06T74182F08	Block 270K ohm×8	
	VR201	18T15355W15	Variable RH064AC 22K ohm	
	VR202	18T15355W09	Variable RH064AC 2.2Kohm	
	VR203	18T15355W15	Variable RH064AC 22K ohm	
	VR204	18T15355W15	Variable RH064AC 22K ohm	
	VR205	18T15355W15	Varuible RH064AC 22K ohm	
	Trans			
	T201	25T94882F01	PULS	
	Crystals			
	X201	91T15285W01	Ceramic LOCK 4.19MHz	
	X202	48T84727F02	AT-51 16.9344MHz	

Symbol No	Part No	Description		
	Power Supply P.C. Board			
	IC's			
	IC101	51T80136F01	M5238P	
	IC102	51T80136F01	M5238P	
	Transistors			
	Q101	48T64375F01	2SA1360	
	Q102	48T60555F01	2SC3298	
	Q103	48T57305F04	2SD1302	
	Q104	48T57305F04	2SD1302	
	Q105	48T57305F04	2SD1302	
	Q106	48T57305F04	2SD1302	
◆	Q107	48T57805F04	2SD1302	
◇	Q107	48T57805F04	2SD1302	
■	Q107	48T57805F04	2SD1302	
□	Q107	48T57805F04	2SD1302	
◆	Q108	48T57805F04	2SD1302	
◇	Q108	48T57805F04	2SD1302	
■	Q108	48T57805F04	2SD1302	
□	Q108	48T57805F04	2SD1302	
	Diodes			
	D101	48S40477U01	IN4003	
	D102	48S40477U01	IN4003	
	D103	48S40477U01	IN4003	
	D104	48S40477U01	IN4003	
	D105	48S40477U01	IN4003	
	D106	48S40477U01	IN4003	
	D107	48S40477U01	IN4003	
	D108	48S40477U01	IN4003	
	ZD101	48T52740F02	ZEN. HZ33-2	
●	ZD102	48T52739F95	ZEN. HZ27-2	
▲	ZD102	48T52739F95	ZEN. HZ27-2	
◆	ZD102	48T68697F72	ZEN. HZS27EB1	
◇	ZD102	48T68697F72	ZEN. HZS27EB1	
■	ZD102	48T68697F72	ZEN. HZS27EB1	
□	ZD102	48T68697F72	ZEN. HZS27EB1	
	Capacitors			
●	C101	08T57437F09	CER. 0.01μF	
▲	C101	08T57437F09	CER. 0.01μF	
◆	C101	08T00196L01	CER. 0.01μF	
◇	C101	08T00196L01	CER. 0.01μF	
■	C101	08T00196L01	CER. 0.01μF	

Note: ●:For Japanese model only (JA)
▲:For General Foreigb model only (EK)
others:Common

◆:For American model only (UZ)
■:For West Germany model only (AD)
◇:For Canadian model only (UQ)
□:For England model only (AG)

Symbol No.	Part No.	Description		
Capacitors				
□ C101	08T00196L01	CER. 0.01 μF		
● C102	08T57437F09	CER. 0.01 μF		
▲ C102	08T57437F09	CER. 0.01 μF		
◆ C102	08T00196L01	CER. 0.01 μF		
◇ C102	08T00196L01	CER. 0.01 μF		
■ C102	08T00196L01	CER. 0.01 μF		
□ C102	08T00196L01	CER. 0.01 μF		
E101	23T00133L38	ELY. 470 μF/50V		
E102	23T00181L23	ELY. 3300 μF/16V		
● C103	08T50579F13	TF. 0.1 μF		
▲ C103	08T50579F13	TF. 0.1 μF		
◆ C103	08T57851F13	TF. 0.1 μF		
◇ C103	08T57851F13	TF. 0.1 μF		
■ C103	08T57851F13	TF. 0.1 μF		
□ C103	08T57851F13	TF. 0.1 μF		
E103	23T00181L73	ELY. 100 μF/100V		
◆ C104	08T94422F01	CER. 0.47 μF		
◇ C104	08T94422F01	CER. 0.47 μF		
■ C104	08T94422F01	CER. 0.47 μF		
□ C104	08T94422F01	CER. 0.47 μF		
E104	23T00181L77	ELY. 470 μF/100V		
E105	23T00133L38	ELY. 470 μF/50V		
E106	23T00181L77	ELY. 470 μF/100V		
E107	23T00137L13	ELY. 33 μF/160V		
E108	23T00137L13	ELY. 33 μF/160V		
◆ E109	23T00180L25	ELY. 10 μF/50V		
◇ E109	23T00180L25	ELY. 10 μF/50V		
■ E109	23T00180L25	ELY. 10 μF/50V		
□ E109	23T00180L25	ELY. 10 μF/50V		
◆ E110	23T00180L23	ELY. 3.3 μF/50V		
◇ E110	23T00180L23	ELY. 3.3 μF/50V		
■ E110	23T00180L23	ELY. 3.3 μF/50V		
□ E110	23T00180L23	ELY. 3.3 μF/50V		
E111	23T00180L08	ELY. 33 μF/16V		
E112	23T00180L08	ELY. 33 μF/16V		
E113	23T00180L24	ELY. 4.7 μF/50V		
E114	23T00180L24	ELY. 4.7 μF/50V		
Jacks				
J101	09T15974W01	2P T6302-D105U		
J102	09T15974W01	2P T6302-D105U		
Coil				
L101	24T82315F01	LINE FK0B160MH02		
Switch				
S101	40T15820W01	PUSH POWER (Power)		

Symbol No.	Part No.	Description		
Volume Control				
VR101 M101	18T10803W02	Volume, RK16313MA		
Remote P.C. Board				
IC				
IC501	51T16094W01	GP1U521		
or	51T16094W02	GP1U521X		
Capacitor				
● C501	08T57298F01	CER. 0.1 μF		
▲ C501	08T57298F01	CER. 0.1 μF		
◆ C501	08T44979P14	CER. 0.1 μF		
◇ C501	08T44979P14	CER. 0.1 μF		
■ C501	08T44979P14	CER. 0.1 μF		
□ C501	08T44979P14	CER. 0.1 μF		
LED				
LD501	48T60947F05	SLH-34VR3F (RED)		
Tube P.C. Board 1				
Resistars				
R705	06T92261F26	MF. 2.4 ohm 2W		
R706	06T92261F26	MF. 2.4 ohm 2W		
Tube P.C. Board 2				
Capacitors				
C401A	08T00019L10	MTL. 2.2 μF		
C401B	08T00019L06	MTL. 1 μF		
E401	23T00137L12	ELY. 22 μ F/160V		
C402A	08T00019L10	MTL. 2.2 μF		
C402B	08T00019L06	MTL. 1 μF		
E402	23T00137L12	ELY. 22 μ F/160V		
C403	08T00019L02	MTL. 0.22 μF		
C404	08T00019L02	MTL. 0.22 μF		
C405	08T00151L17	P.P 2200pF		
C406	08T00151L17	P.P 2200pF		
FL/Key Board P.C. Board				
Diodes				
D301	48T84758F01	1SS270		
D302	48T84758F01	1SS270		
D303	48T84758F01	1SS270		
D304	48T84758F01	1SS270		
D305	48T84758F01	1SS270		

Note: ●:For Japanese model only (JA)
▲:For General Foreign model only (EK)
others:Common

◆:For American model only (UZ)
■:For West Germany model only (AD)
◇:For Canadian model only (UQ)
□:For England model only (AG)

Symbol No	Part No	Description		
D306	48T84758F01	1SS270		
D307	48T84758F01	1SS270		
D308	48T84758F01	1SS270		
D309	48T84758F01	1SS270		
D310	48T84758F01	1SS270		
D311	48T84758F01	1SS270		
D312	48T84758F01	1SS270		
Switchs				
S301	40T83324F11	Tact SKHHAP (REPEAT)		
S302	40T83324F11	Tact SKHHAP (6)		
S303	40T83324F11	Tact SKHHAP (0)		
S304	40T83324F11	Tact SKHHAP (A-PAUSE)		
S305	40T83324F11	Tact SKHHAP (7)		
S306	40T83324F11	Tact SKHHAP (1)		
S307	40T83324F11	Tact SKHHAP (A-SCN)		
S308	40T83324F11	Tact SKHHAP (8)		
S309	40T83324F11	Tact SKHHAP (2)		
S310	40T83324F11	Tact SKHHAP (M-CHECK)		
S311	40T83324F11	Tact SKHHAP (9)		
S312	40T83324F11	Tact SKHHAP (3)		
S313	40T83324F11	Tact SKHHAP (RANDOM)		
S314	40T83324F11	Tact SKHHAP (10)		
S315	40T83324F11	Tact SKHHAP (4)		
S316	40T83324F11	Tact SKHHAP (EDIT)		
S317	40T83324F11	Tact SKHHAP (+10)		
S318	40T83324F11	Tact SKHHAP (5)		
S319	40T83324F11	Tact SKHHAP (STOP)		
S320	40T83324F11	Tact SKHHAP (CLEAR)		
S321	40T83324F11	Tact SKHHAP (PAUSE)		
S322	40T83324F11	Tact SKHHAP (PROGRAM)		
S323	40T83324F11	Tact SKHHAP (PLAY)		
S324	40T83324F11	Tact SKHHAP (OPEN/CLOSE)		
S325	40T83324F11	Tact SKHHAP (SKIP+UP)		
S326	40T83324F11	Tact SKHHAP (BACKWORD)		
S327	40T83324F11	Tact SKHHAP (FORWORD)		
S328	40T83324F11	Tact SKHHAP (SKIP-DOWN)		
S329	40T83324F11	Tact SKHHAP (DISP.ADJ)		
S330	40T83324F11	Tact SKHHAP (TIME-DISP)		
Fade P.C. Board				
S901	40T83324F11	Tact SKHHAP (T.FADE-OUT)		
S902	40T83324F11	Tact SKHHAP (VOL.DOWN)		
S903	40T83324F11	Tact SKHHAP (VOL.UP)		
S904	40T83324F11	Tact SKHHAP (FADE-OUT)		

Symbol No	Part No	Description		
Miscellaneous				
● C801	08T57298F01	Cap., Cer. 0.1μF		
▲ C801	08T57298F01	Cap., Cer. 0.1μF		
◆ C801	08T44979P14	Cap., Cer. 0.1μF		
◇ C801	08T44979P14	Cap., Cer. 0.1μF		
■ C801	08T44979P14	Cap., Cer. 0.1μF		
□ C801	08T44979P14	Cap., Cer. 0.1μF		
FL301	65T15386W01	FL, Display FV335G		
▲ F102	65T42077U11	Fuse, Semko 315mA		
■ F102	65T42077U11	Fuse, Semko 315mA		
□ F102	65T42077U11	Fuse, Semko 315mA		
IC105	51T16168W01	IC. μPC2412HF		
J801	09T66672F01	J90K, Head Phone		
● P801	28T67434F01	Plug, AC Cord		
▲ P801	28T43812P04	Plug, AC Cord		
■ P801	28T43812P04	Plug, AC Cord		
□ P801	28T44061F05	Plug, AC Cord		
◆ P801	28T55335F02	Plug, AC Cord		
◇ P801	28T55335F02	Plug, AC Cord		
Q701	65T00091L01	Tube (6CG7)		
Q702	65T00091L01	Tube (6CG7)		
R601	06T92262F23	Res, MF 1.8 ohm 3W		
R602	06T92262F23	Res, MF 1.8 ohm 3W		
S601	40T15685W01	SW. Push (Pre-Heat)		
● T101	25T16178W01	Trans, Power		
▲ T101	25T16178W02	Trans, Power		
■ T101	25T16178W02	Trans, Power		
□ T101	25T16178W02	Trans, Power		
◆ T101	25T16178W03	Trans, Power		
◇ T101	25T16178W03	Trans, Power		

Note : ● : For Japanese model only (JA)
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Ohter : Common

◆ : For American model only (UZ)
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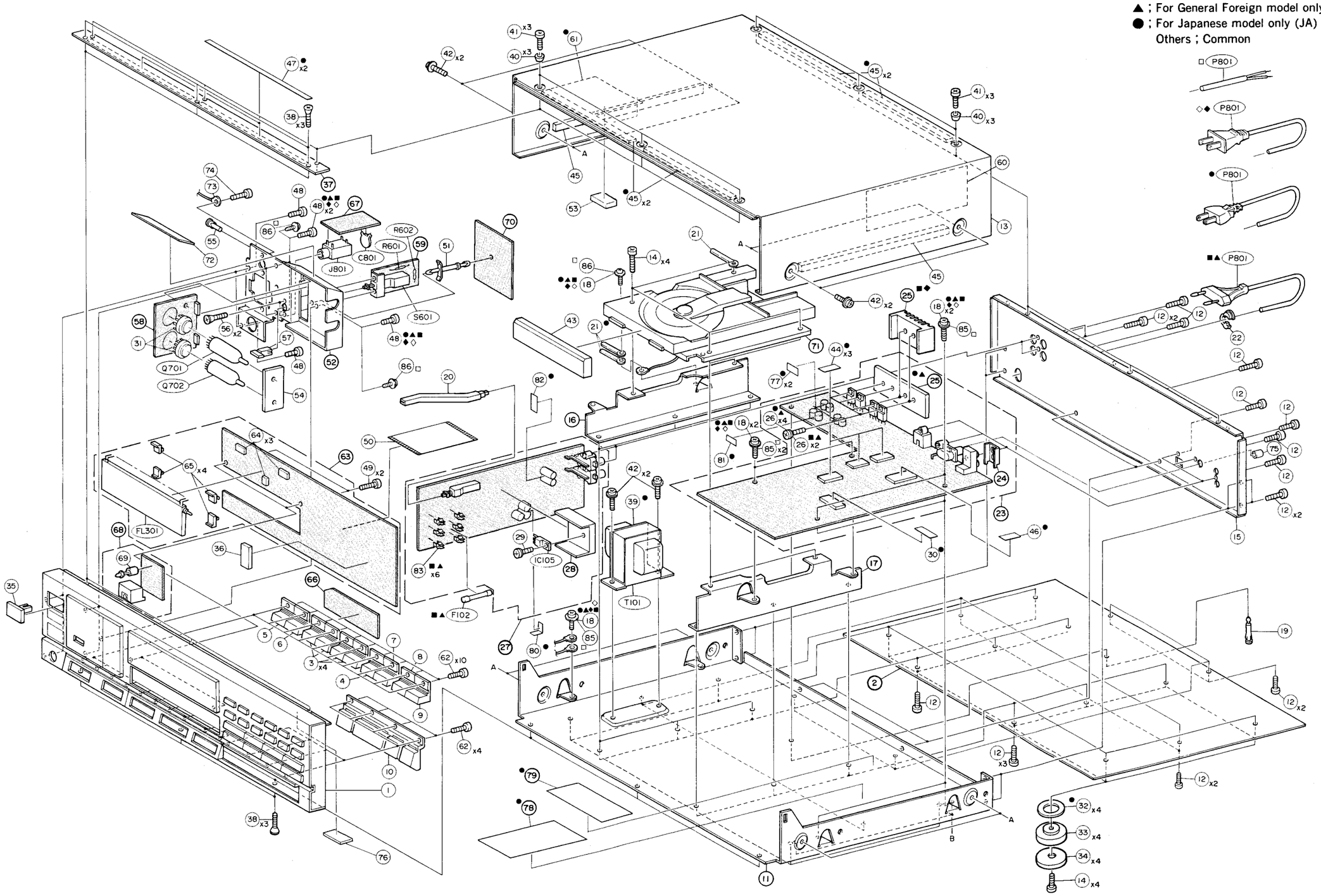
□ : For England model only (AG)

Exploded View(Cabinet)

Note : ◇ ; For Canadian model only (UQ)
□ ; For England model only (AG)
◆ ; For American model only (UZ)
■ ; For West Germany model only (AD)
▲ ; For General Foreign model only (EK)
● ; For Japanese model only (JA)
Others ; Common



Cabinet Assembly Parts List

Note : The parts witout part mubers are not supplied.

Symbol No		Index	Part No	Description
●	1	5-C	01V00280S01	Assy., Panel Front
▲	1	5-C	01V00281S01	Assy., Panel Front
◆	1	5-C	01V00281S01	Assy., Panel Front
◇	1	5-C	01V00281S01	Assy., Panel Front
■	1	5-C	01V00281S01	Assy., Panel Front
□	1	5-C	01V00281S01	Assy., Panel Front
	3	4-B	36A11877W01	Knob, Display
	4	4-B	36A11877W04	Knob, Push Backward
	5	4-B	36A11877W02	Knob, Push VR Down
	6	4-C	36A11877W03	Knob, Push VR Up
	7	4-C	36A11877W05	Knob, Push Forward
	8	4-C	36A11877W06	Knob, Skip Down
	9	5-C	36A11877W07	Knob, Skip Up
	10	5-C	36B11878W01	Knob, Function
●	12		03S82672F33	Screw, Bind (M3×8)
▲	12		03S82672F20	Screw, Bind (M3×8)
■	12		03S82672F20	Screw, Bind (M3×8)
□	12		03S82672F20	Screw, Bind (M3×8)
◆	12		03S82672F20	Screw, Bind (M3×8)
◇	12		03S82672F20	Screw, Bind (M3×8)
	13	2-F	15C11879W01	Cover, Top
	14	2-G	03S44205G28	Screw, Pan (M4×12)
●	15	4-G	15D11880W01	Cover, Rear
▲	15	4-G	15D11880W02	Cover, Rear
■	15	4-G	15D11880W02	Cover, Rear
□	15	4-G	15D11880W02	Cover, Rear
◆	15	4-G	15D11880W03	Cover, Rear
◇	15	4-G	15D11880W03	Cover, Rear
	18	3-D	03S40018G08	Screw, Tpg (M3×8)
	19	4-G	43T92160F04	Spacer, PCB 18R
	20	3-C	45B57186F01	Lever, Knob
●	21	3-D	29C41045P03	Lug, Wrap Around
▲	21	3-D	29C41045P03	Lug, Wrap Around
◆	21	3-D	29C41045P03	Lug, Wrap Around
■	21	3-D	29C41045P03	Lug, Wrap Around
◇	21	3-D	29C41045P03	Lug, Wrap Around
□	21	3-D	29C41045P05	Lug, Wrap Around
▲	22	3-G	43T16093W01	Support, Cord
●	22	3-G	43B41625J02	Support, Cord
◆	22	3-G	43B41625J02	Support, Cord
◇	22	3-G	43B41625J02	Support, Cord
■	22	3-G	43B41625J02	Support, Cord
□	22	3-G	43B41625J02	Support, Cord
	26	3-E	03D40014G22	Screw, W/Washer (M3×8)
	29	4-C	03C40121T05	Screw, W/Washer (M3×8)

Symbol No		Index	Part No	Description
●	30	4-F	14S94461F85	Insulator, Cover
	31	3-A	09T64527F02	Socket, Tube
●	32	5-F	75A13129W01	Pad, Trannleg
▲	33	5-F	75A67063F03	Trannleg
■	33	5-F	75A67063F03	Trannleg
□	33	5-F	75A67063F03	Trannleg
◆	33	5-F	75A67063F03	Trannleg
◇	33	5-F	75A67063F03	Trannleg
●	33	5-F	75B80720F04	Trannleg, set G
▲	34	5-F	75A94848F01	Pad, Felt
■	34	5-F	75A94848F01	Pad, Felt
□	34	5-F	75A94848F01	Pad, Felt
◆	34	5-F	75A94848F01	Pad, Felt
◇	34	5-F	75A94848F01	Pad, Felt
●	34	5-F	75A80719F01	Pad, Trannleg
	35	4-A	36A67330F01	Knob, Power
●	36	4-B	75S72374F91	Cushion Rubber
	38		03S44205G50	Screw,Countersink(3M×6)
●	39	3-D	14S20478W02	Insulator, Cover
	40		13A13279W01	ESC, Screw, (N)
	41		03S52360F36	Screw, Bind (M4×8)
	42	1-C	03S40036U01	Screw, W/Washer (M4×8)
	43	3-D	63B11870W01	Tray, Panel
●	44	3-E	14S94461F86	Insulator, Cover
	45	1-E	75S12196W27	Cushion, Rubber
●	46	4-F	14S94461F87	Insulator, Cover
●	47	1-B	14S96390F69	Insulator, Cover
	48	3-B	03S63857F23	Screw, Tapping (M2.6×8)
	49	3-C	03S40018G17	Screw, Tapping (M2.6×8)
	50	3-C	30T15818W01	Wire, Push Paraller 29P
	51	2-C	43T16241W08	Support, PCB
	53	2-D	75S12196W40	Cushion, Rubber
	54	3-B	75A67341F01	Cushion, Tube
	55	2-B	05B41635J03	Rivet, Push
	56	3-B	03S43997P42	Screw,Countersink(M3×5)
	57	3-B	36A67333F01	Knob, Push
●	60	2-F	14S96390F70	Insulator, Cover
●	61	1-D	14S20478W01	Insulator, Cover
	62		03S40012G18	Screw, Tapping (M2.6×6)
	64	3-B	75S12196F21	Cushion, Rubber

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□:For England model only (AG)

Symbol No		Index	Part No	Description
	65	3-B	07A83876F01	Support, FL
	69	4-A	43A41837U05	Spacer, SW
	72	2-B	14S96390F58	Insulator, Cover
	73	2-B	01T84733F11	Assy., Lug Wire
	74	2-B	03S44205G06	Screw, Pan (M3.5×6)
	75		16T82537F01	Cap, Pin Jack
	76	5-C	75S72374F75	Cushion, Rubber
●	77	3-E	14S94461F86	Insulator, Cover
●	80	4-C	14S96390F99	Insulator, Cover
●	81	3-D	14S96390F98	Insulator, Cover
●	82	3-D	14S94461F87	Insulator, Cover
■	83	4-C	09T51410F01	Holder, Fuse
□	83	4-C	09T51410F01	Holder, Fuse
▲	83	4-C	09T51410F01	Holder, Fuse
□	84		03S44205G67	Screw, Bind. (M3×6)
□	85		03S42723U01	Screw, Cap. (M3×6)
□	86		03S71677F06	Screw, Flange. (M2.6×6)

Symbol No	Index	Part No	Description

Note : ● : For Japanese model only (JA)
▲ : For General Foreign model only (EK)
Ohters : Common

◆:For American model only (US)
■:For West German model only (AD)
◇:For Canadian model only (UQ)
□:For England model only (AG)

Packing Assembly Parts List

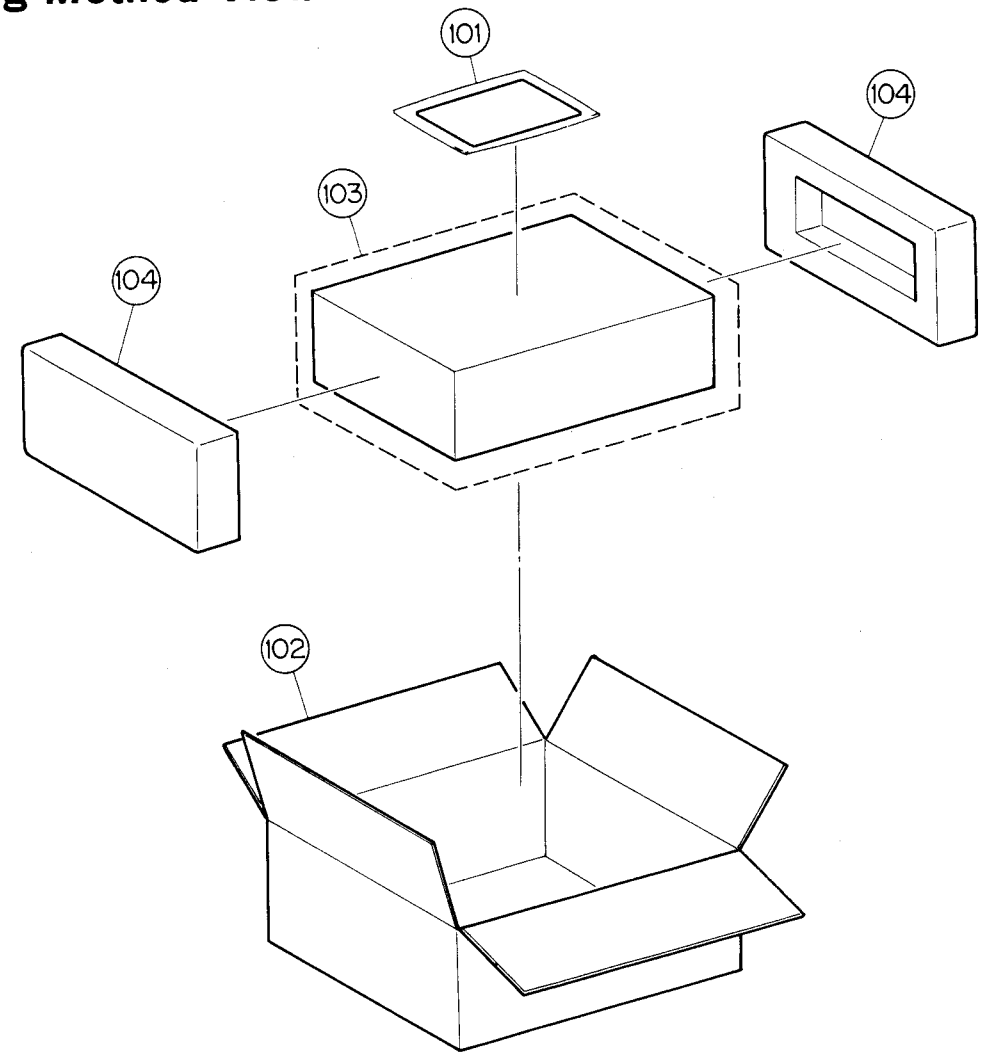
Symbol No	Part No	Description		
● 101-1	68P96552F25	Owners, Manual		
◆ 101-1	68P96552F26	Owners, Manual		
◇ 101-1	68P96552F27	Owners, Manual		
▲ 101-1	68P96552F27	Owners, Manual		
■ 101-1	68P96552F27	Owners, Manual		
□ 101-1	68P96552F27	Owners, Manual		
101-2	01T82091F01	Assy., Mini Plug Cord		
● 101-3	01T16150W01	Unit, Remocon		
▲ 101-3	01T16150W02	Unit, Remocon		
■ 101-3	01T16150W02	Unit, Remocon		
◆ 101-3	01T16150W02	Unit, Remocon		
◇ 101-3	01T16150W02	Unit, Remocon		
□ 101-3	01T16150W02	Unit, Remocon		

Symbol No	Part No	Description		
101-4	60T58064F01	Battery, SUM-3		
101-5	28T67347F04	Plug, Output		
◆ 101-6	01T84773F01	Fiber, TOCP172-150CB		
◇ 101-6	01T84773F01	Fiber, TOCP172-150CB		
■ 101-6	01T84773F01	Fiber, TOCP172-150CB		
● 102	56S10005W27	Carton, Packing		
◆ 102	56S10005W27	Carton, Packing		
▲ 102	56S10005W27	Carton, Packing		
■ 102	56S10005W27	Carton, Packing		
□ 102	56S10005W27	Carton, Packing		
◇ 102	56S10005W28	Carton, Packing		
103	56B40442T08	Packing, Front Frame		
104	56D11887W01	Tray, Packing		

Note : ● : For Japanese model only (JA)
▲ : For General Foreign model only (EK)
Others : Common

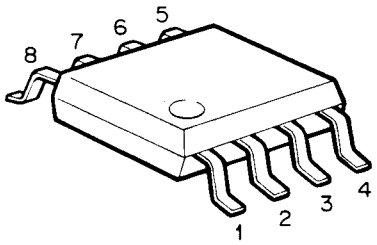
◆ : For American model only (UZ)
■ : For West German model only (AD)
◇ : For Canadian model only (UQ)
□ : For England model only (AG)

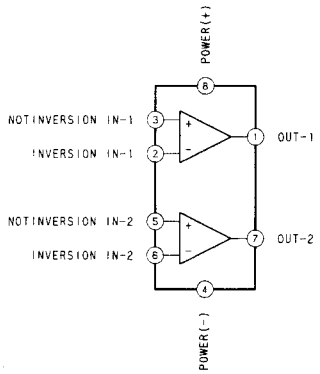
Packing Method View



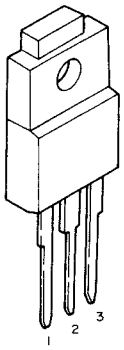
Semi-Conductor Lead Indentifications

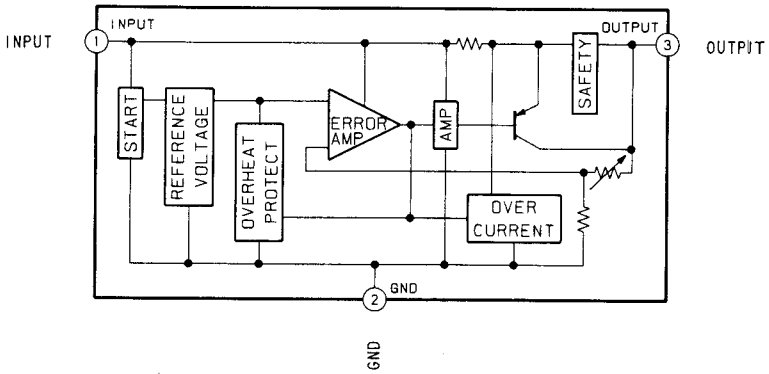
M5238P : IC101, 102



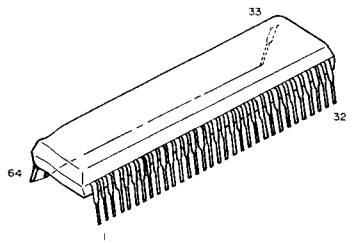


μPC2412HF : IC105



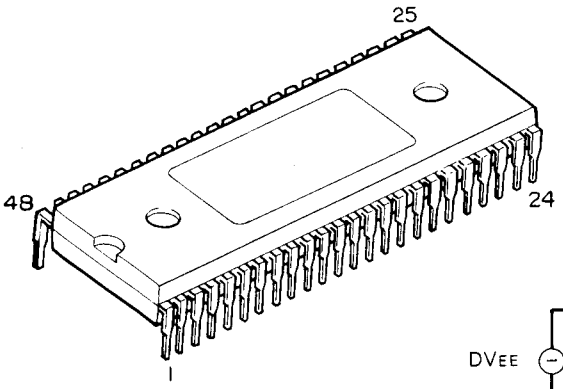


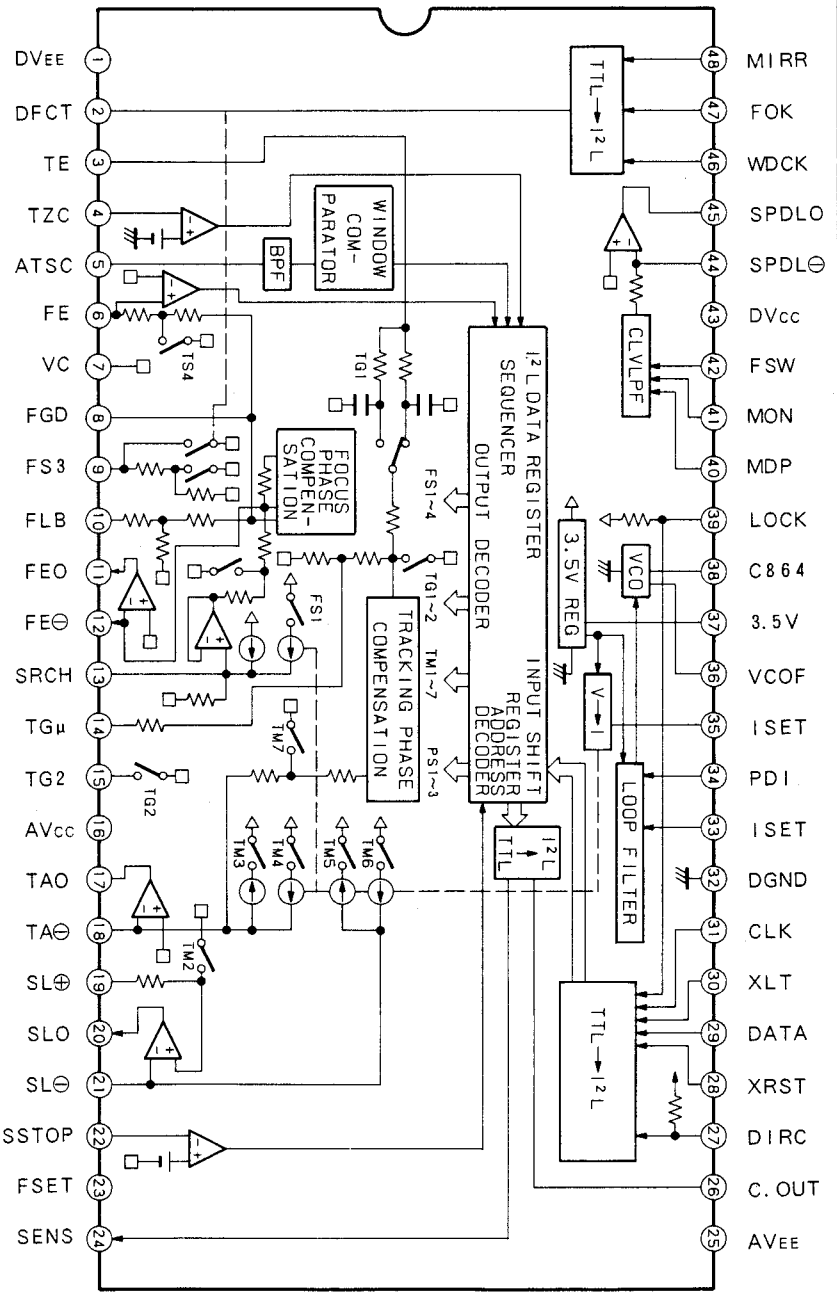
15365W02 : IC201 (JA/EK Model only)
15749W02 : IC201 (AD/UZ/AG/UQ Model only)



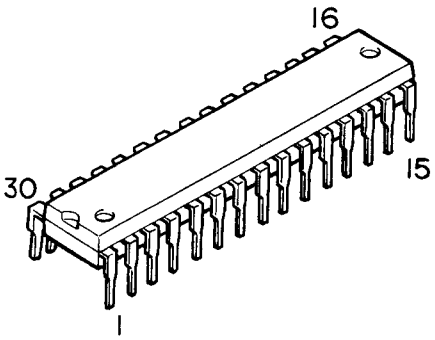
1	SEG4	17	EMPHA	33	SQ CK	49	OSC
2	SEG3	18	GFS	34	SUBQ	50	GND
3	SEG2	19	-35V	35	FOK	51	GND
4	SEG1	20	A.MUTE	36	PWM	52	NC
5	SEG0	21	CLOSE SW	37	SENS	53	+5V
6	DIG0(1G)	22	OPEN SW	38	NC	54	VOL CP
7	DIG1(2G)	23	LD ON	39	MUTE	55	VOL UP
8	DIG2(3G)	24	XRST	40	RHT SW	56	VOL DOWN
9	DIG3(4G)	25	XLT	41	CLOSE	57	SEG12
10	DIG4(5G)	26	DATA	42	OPEN	58	SEG11
11	DIG5(6G)	27	CLK	43	SWRTN	59	SEG10
12	DIG6(7G)	28	POWER	44	KRTN2	60	SEG9
13	DIG7(8G)	29	SCOR	45	KRTN1	61	SEG8
14	DIG8(9G)	30	RMC	46	KRTN0	62	SEG7
15	DIG9(10G)	31	NC	47	RESET	63	SEG6
16	DIMM	32	+5V	48	OSC	64	SEG5

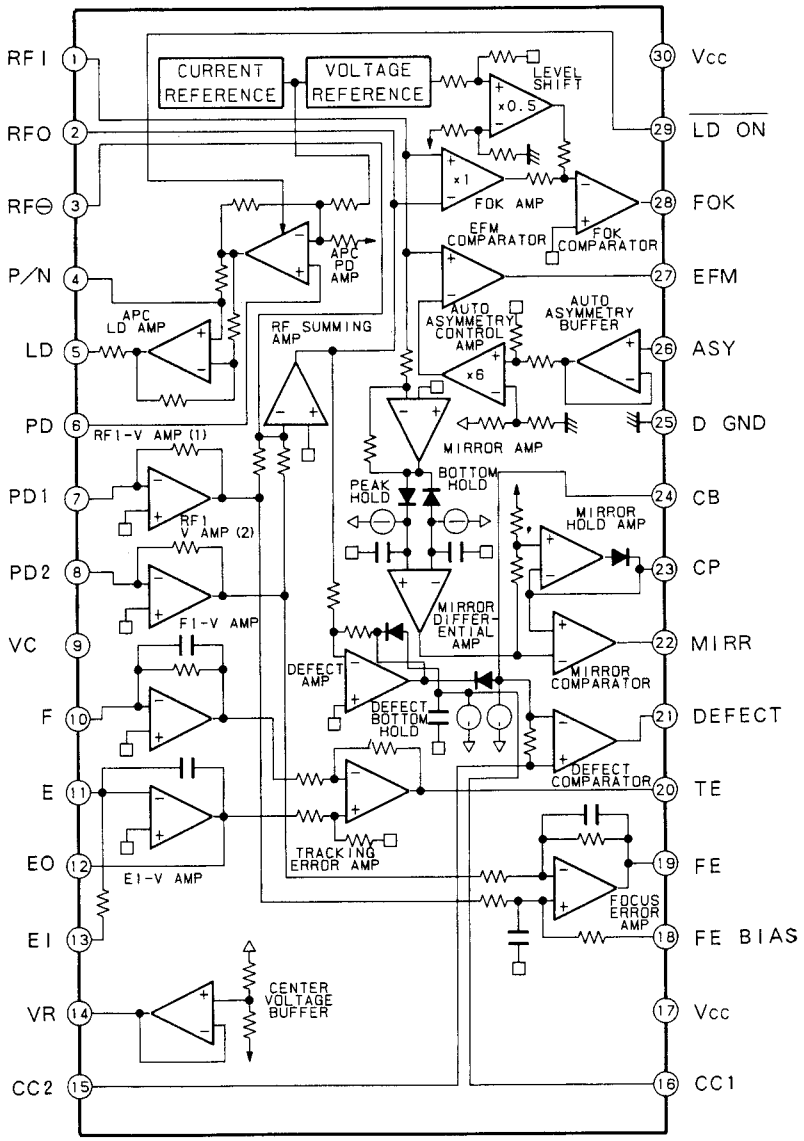
CXA1082BS : IC202



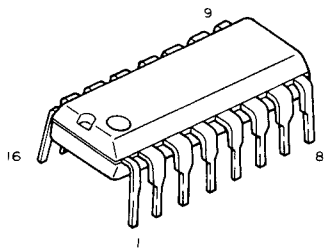


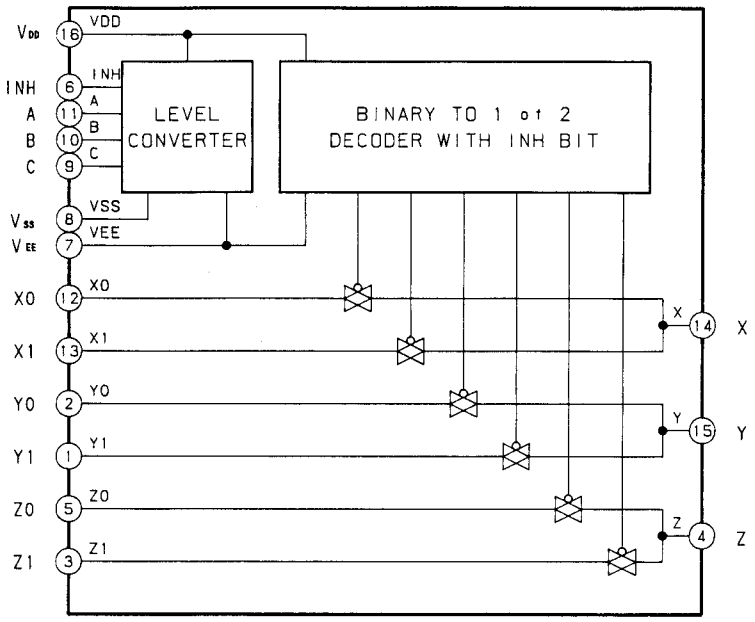
CXA1081S : IC203



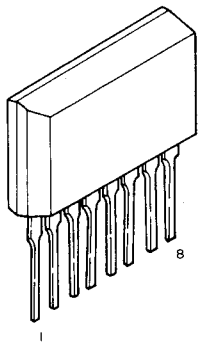


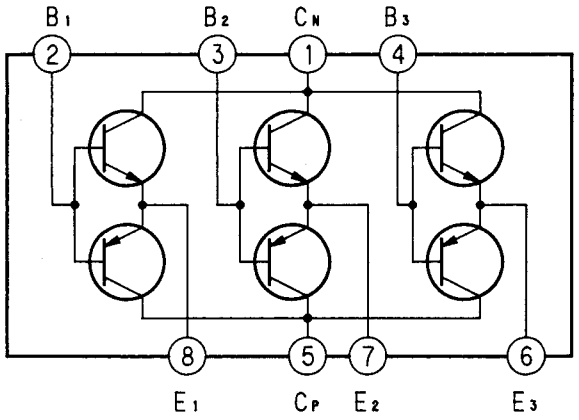
MC14053 : IC204 (JA/EK Model only)





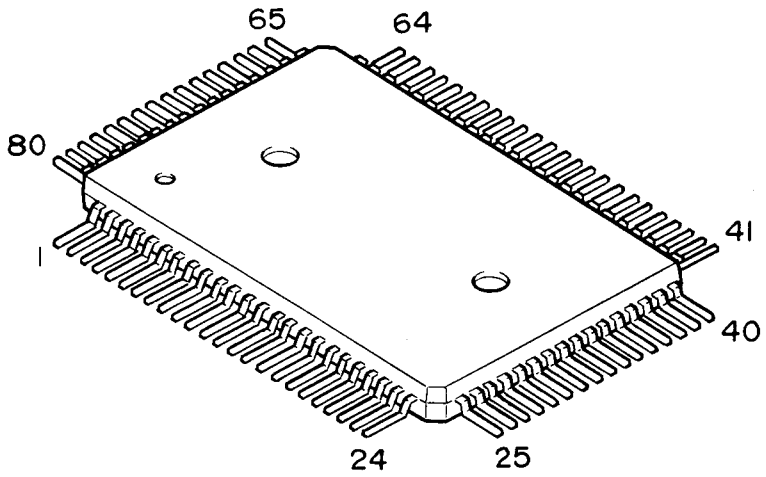
STA341M : IC204 (AD/UZ/AG/UQ Model only)

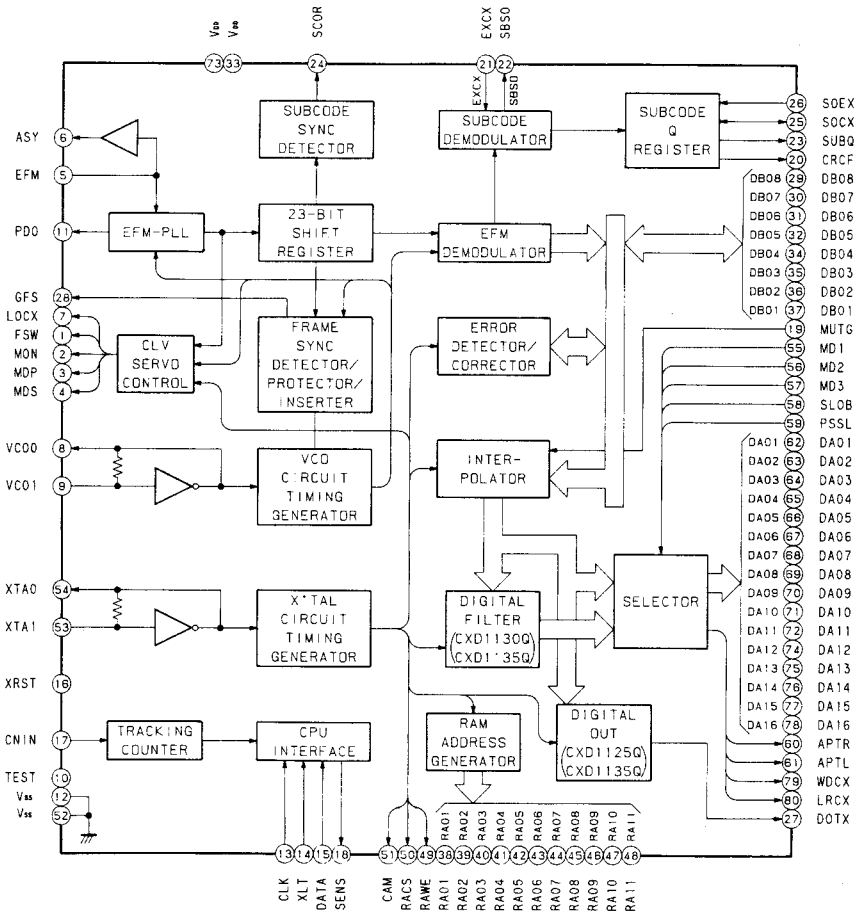




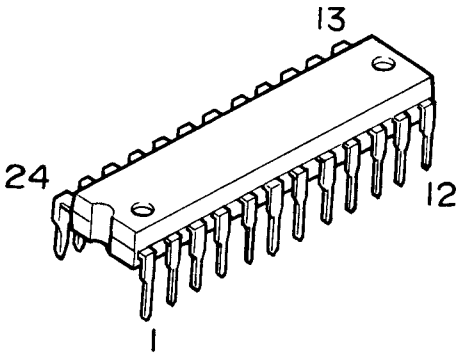
B. Base
C. Collector
E. Emitter

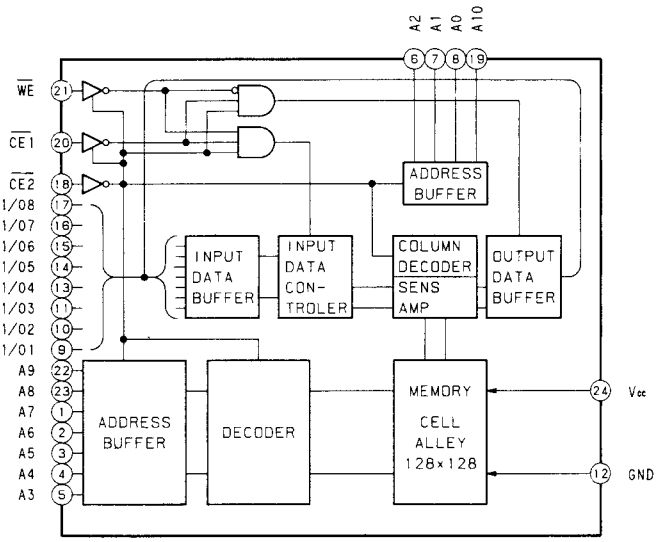
CXD1125QZ : IC205



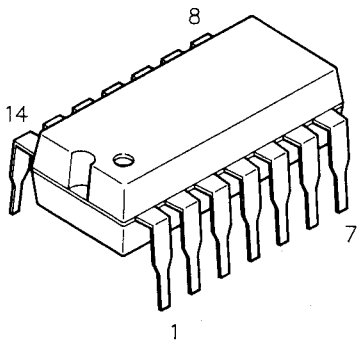


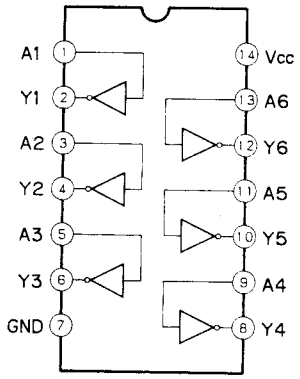
LC3516AS : IC206



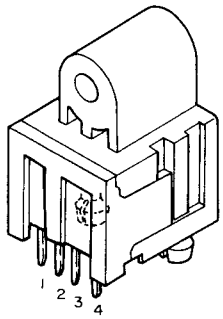


MC74HCU04 : IC207



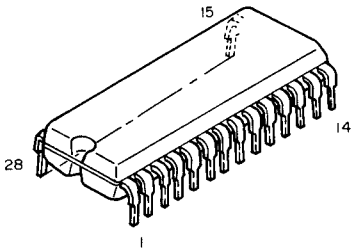


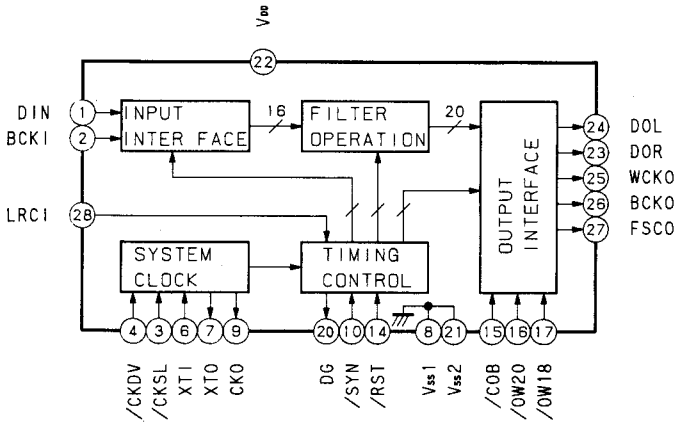
HFBR1550 : IC208



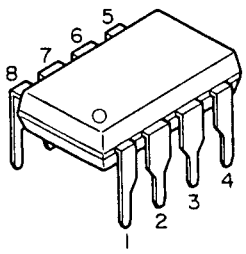
	Transmitter	Receiver
1	LED-Anode	V_{ccd}
2	LED-Cathode	V_{OUT}
3	N.C	GRD
4	N.C	V_{cca}

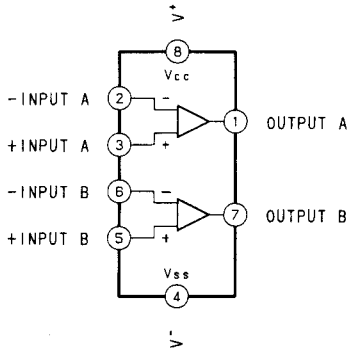
SM5813AP : IC209



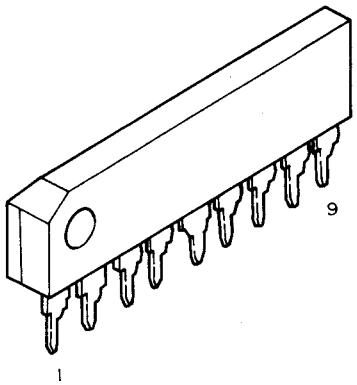


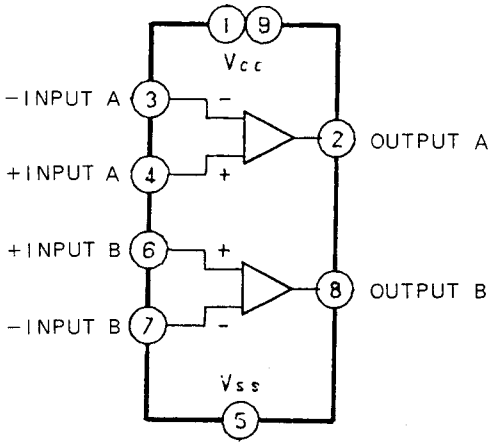
NJM2903D : IC210 (JA/EK Model only)



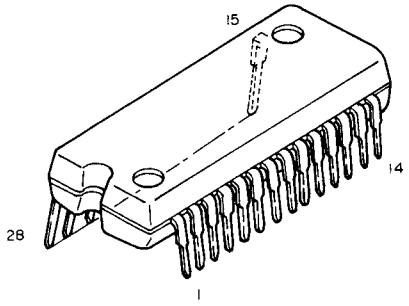


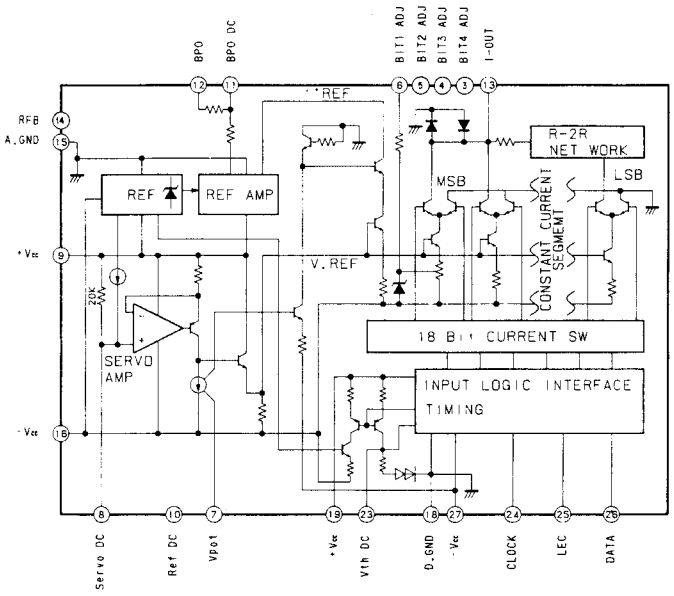
NJM2903S : IC210 (AD/UZ/AG/UQ Model only)



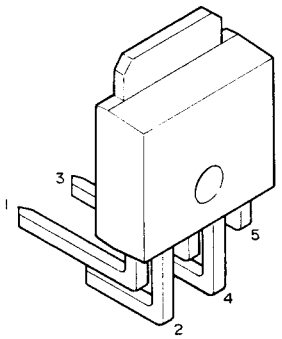


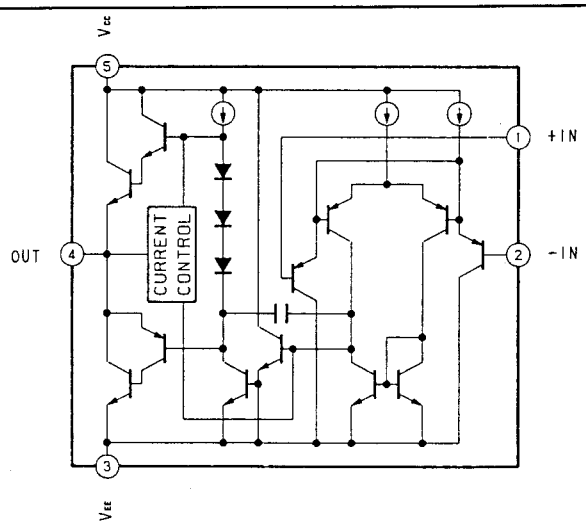
PCM701P : IC211, 212



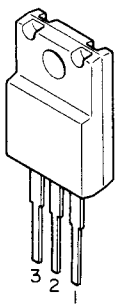


LA6501 : IC213, 218

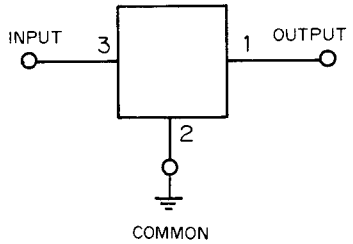




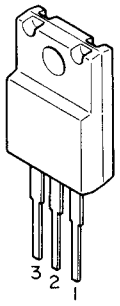
NJM7805 : IC214

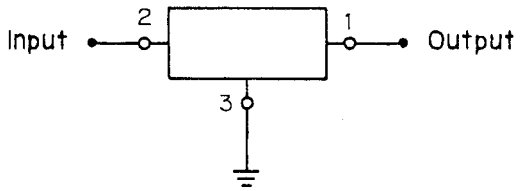


1. Output
2. Common
3. Input



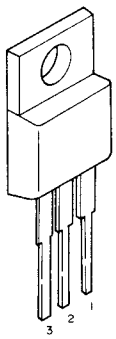
NJM7905 : IC215, IC217

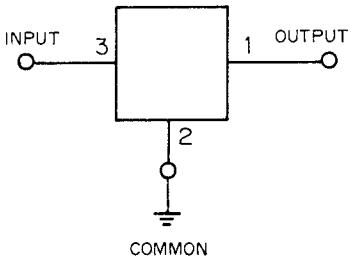




1. Output
2. Input
3. Common

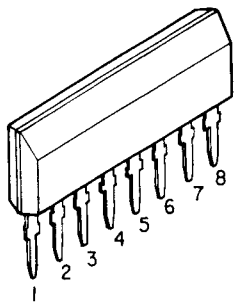
NJM7808 : IC216 (JA/EK Model only)
NJM7808FA : IC216 (AD/UZ Model only)

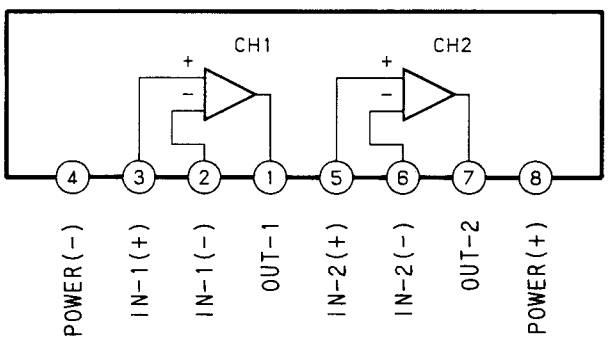




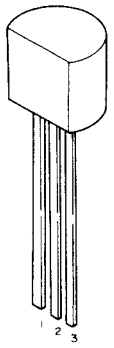
1. Output
2. Common
3. Input

M5238L : IC219, 220

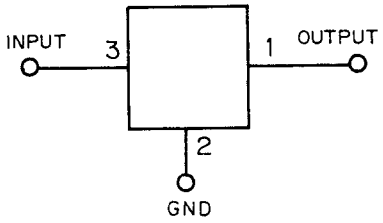




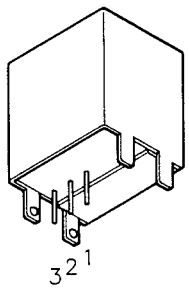
NJM78L05A : IC221



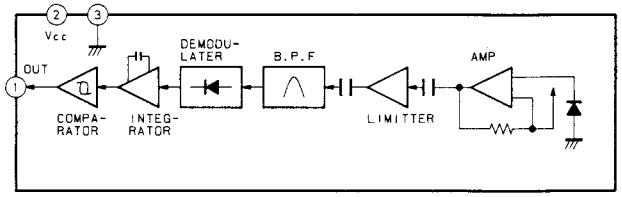
1. Output
2. GND
3. Input



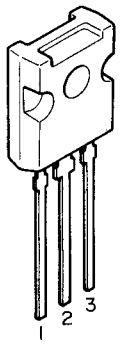
GP1U521 : IC501
or GP1U521X



1. V OUT
2. V CC
3. GND

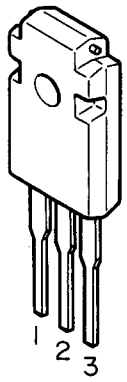


2SA1360 : Q101
2SC3421 : Q212
: Q214, 216, 218 (JA/EK Model only)
2SA1358 : Q213
: Q215, 217, 219 (JA/EK Model only)



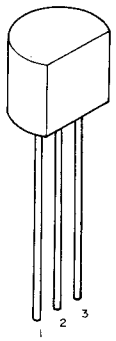
1. Emitter
2. Collector
3. Base

2SC3298 : Q102



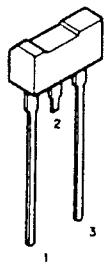
1. Base
2. Collector
3. Emitter

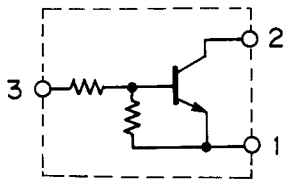
2SD1302 : Q103, 104, 105, 106, 221, 222
: Q107, 108 (AD/UZ/AG/UQ Model only)
2SA854Q : Q201
2SA950 : Q223 (AD/UZ/AG/UQ Model only)



1. Emitter
2. Collector
3. Base

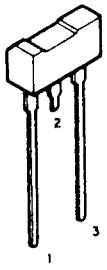
DTC114EL : Q204, 207, 208, 209
: Q224, 225 (AD/UZ/AG/UQ Model only)

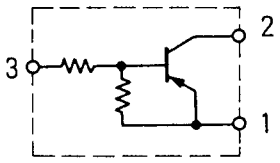




1. Emitter
2. Collector
3. Base

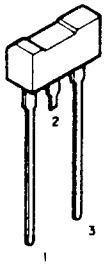
DTA114EL : Q205, 206





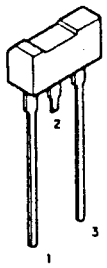
1. Emitter
2. Collector
3. Base

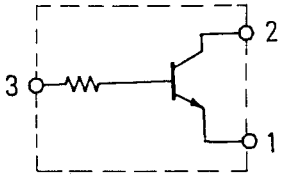
2SC4038 : Q210, 211
2SB1277 : Q220



1. Emitter
2. Collector
3. Base

DTC124TL : Q226 (AD/UZ/AG/UQ Model only)





1. Emitter
2. Collector
3. Base

LUX CORPORATION, JAPAN
1-1-8 Nishi Gotanda, Shinagawa-ku, Tokyo, 141 JAPAN
Phone: 03-493-4381 Facsimile: 03-494-8426

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